

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Draft Staff Report Proposed Rule 1430 – Control of Emissions from Metal Grinding Operations at Metal Forging Facilities

February 2017

Deputy Executive Officer

Planning, Rule Development, and Area Sources
Philip M. Fine, Ph.D.

Acting Assistant Deputy Executive Officer

Planning, Rule Development, and Area Sources
Susan Nakamura

Authors:

Dan Garcia – AQ Specialist
Neil Fujiwara – AQ Specialist

Contributors:

Mohan Balagopalan – Senior AQ Engineering Manager
Jo Kay Ghosh – Public Health Effects Officer
Mike Garibay – Supervising AQ Engineer
Stacey Ebner – AQ Analysis and Compliance Supervisor
Al Baez – AQ Analysis and Compliance Supervisor
Jason Aspell – Senior AQ Engineer
Don Nguyen – Senior AQ Engineer
Erwin dela Cruz – Senior AQ Engineer
Eric Padilla – AQ Engineer II
Monica Fernandez-Nield – AQ Engineer II
Michael Solis – AQ Engineer II
Payam Pakbin – AQ Specialist

Reviewed by:

Barbara Baird – Chief Deputy Counsel
William Wong – Principal Deputy District Counsel
Eugene Kang – Program Supervisor

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
GOVERNING BOARD**

Chairman: DR. WILLIAM A. BURKE
Speaker of the Assembly Appointee

Vice Chairman: BEN BENOIT
Mayor Pro Tem, Wildomar
Cities of Riverside County

MEMBERS: MARION ASHLEY
Supervisor, Fifth District
County of Riverside

JOE BUSCAINO
Councilmember, 15th District
City of Los Angeles Representative

MICHAEL A. CACCIOTTI
Mayor, South Pasadena
Cities of Los Angeles County/Eastern Region

JOSEPH K. LYOU, Ph. D.
Governor's Appointee

SHEILA KUEHL
Supervisor, Third District
County of Los Angeles

LARRY MCCALLON
Mayor Pro Tem, Highland
Cities of San Bernardino County

JUDITH MITCHELL
Councilmember, Rolling Hills Estates
Cities of Los Angeles County/Western Region

SHAWN NELSON
Supervisor, Fourth District
County of Orange

DR. CLARK E. PARKER, SR.
Senate Rules Committee Appointee

DWIGHT ROBINSON
Councilmember, Lake Forest
Cities of Orange County

JANICE RUTHERFORD
Supervisor, Second District
County of San Bernardino

EXECUTIVE OFFICER:
WAYNE NASTRI

TABLE OF CONTENTS

CHAPTER 1: BACKGROUND

INTRODUCTION	1-1
BACKGROUND	1-1
SAMPLING FROM OTHER METAL FORGING FACILITIES	1-4
NEED FOR PROPOSED RULE 1430	1-5
PUBLIC PROCESS	1-6
INDUSTRY PROCESS DESCRIPTION	1-6
METAL GRINDING AND CUTTING CONTROL STRATEGIES	1-10

CHAPTER 2: SUMMARY OF PROPOSED RULE 1430

OVERALL APPROACH	2-1
PROPOSED RULE 1430	2-1

CHAPTER 3: IMPACT ASSESSMENT

AFFECTED SOURCES	3-1
EMISSIONS IMPACT	3-2
CALIFORNIA ENVIRONMENTAL QUALITY ACT	3-2
SOCIOECONOMIC ASSESSMENT	3-2
DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727	3-3
COMPARATIVE ANALYSIS	3-4

REFERENCES	R-1
-------------------	------------

APPENDIX A: RESPONSE TO COMMENTS	A-1
---	------------

TABLES AND FIGURES

Figure 1-1: Aerial Map of Ambient Air Monitoring Downwind CFW in Paramount, CA

Figure 1-2: Nickel (ng/m³) from Site #2

Figure 1-3: Measures Implemented at CFW

Figure 1-4: Average Nickel and Hexavalent Chromium Levels (ng/m³) at Site #2

Figure 1-5: Glass Plate Sampling at Metal Forging Facilities (2014)

Figure 1-6: Types of Enclosures

Table 3-1: Metal Forging Facilities Identified to Conduct Metal Grinding or Cutting

Table 3-2: Summary of Number of Facilities with Various Types of Grinding Activities

Table 3-3: Summary of Types of Air Pollution Controls for Various Grinding Activities

Table 3-4: Comparison of PR 1430 with NESHAP for Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

CHAPTER 1: BACKGROUND

INTRODUCTION

BACKGROUND

SAMPLING FROM OTHER METAL FORGING FACILITIES

NEED FOR PROPOSED RULE 1430

PUBLIC PROCESS

INDUSTRY PROCESS DESCRIPTION

METAL GRINDING AND CUTTING CONTROL STRATEGIES

INTRODUCTION

The South Coast Air Quality Management District (SCAQMD) is the lead air pollution agency in the South Coast Air Basin (SCAB) and has jurisdiction over all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD performs inspections of more than 27,000 facilities in the Basin, in addition to responding to thousands of public complaints regarding air quality.

Proposed Rule 1430 is designed to reduce emissions from metal grinding and metal cutting operations at forging facilities. Both metal grinding and cutting operations are currently exempt from SCAQMD permits, and as such operations are currently an unregulated source category. Although some of the metal grinding operations have air pollution controls, most are not permitted. The issue of grinding emissions at forging facilities was brought to the attention of the SCAQMD based on community complaints regarding odors and visible emissions near a forging facility in the City of Paramount. Based on investigations, the SCAQMD staff identified fugitive metal particulate emissions from Carlton Forge Works' (CFW) grinding operation and the need to control these emissions. During the development of Proposed Rule 1430, staff visited other metal forging facilities throughout the Basin. Similar to CFW, staff found that other forging facilities lacked necessary pollution controls to manage point and fugitive emissions from their metal grinding and cutting operations. Depending on the metal alloys, some metal particulate can be toxic air contaminants posing a potential health risk to the surrounding community if emissions are not well controlled. Proposed Rule 1430 will ensure metal particulate emissions are appropriately vented to pollution control equipment, fugitive emissions are contained within a building enclosure, and housekeeping measures are implemented to further minimize emissions from metal grinding and metal cutting operations at metal forging facilities.

BACKGROUND

In 2012, the SCAQMD began receiving complaints from the public regarding a burning metallic odor and metal particulate in the City of Paramount. Through air quality analysis and investigation of surrounding businesses, Carlton Forge Works (CFW) was identified as a source of these metallic odors, which arise primarily from their metal grinding operations. CFW manufactures forged high-temperature alloy rings for aerospace, gas turbine, and other industries, using metals such as stainless steel, nickel, titanium, aluminum, cobalt, and iron, as well as other high temperature metals with special properties. CFW operates a large grinding room with 25 grinding booths, each equipped with a handheld air grinder or a swing grinder and vented to one of three pieces of air pollution control equipment (baghouses).

In August 2013, the SCAQMD staff began ambient air monitoring at three locations near of CFW to measure the levels of various metals. Figure 1-1 below shows an aerial map of the three ambient air monitors in relation to the CFW facility and the nearby community. Sites #1 and #2 identified in Figure 1-2 are located on Vermont Avenue and represent exposures immediately downwind of CFW. Site #1 was only active August 2, 2013 through October 1, 2013 due to access limitations. Site #2 and #3 began sampling on August 8, 2013 and October 31, 2013, respectively, and are currently collecting samples as of this writing. The sampling schedules are consistent with many of the toxics air monitoring programs conducted by SCAQMD. The

ambient air monitors measure metals from all nearby sources, including CFW and other metal processing facilities, as well as regional background emissions. Based on a review of the air monitoring results, the two main metals of concern, given their toxicity, were nickel and hexavalent chromium.

Figure 1-1: Aerial Map of Ambient Air Monitoring Downwind Carlton Forge Works in Paramount, CA



Nickel and hexavalent chromium levels from Site #3 were generally consistent with background levels based on SCAQMD's Multiple Air Toxics Study (MATES) IV. When monitoring began in 2013, nickel levels at Site #2 were elevated as shown in Figure 1-2. As CFW implemented a series of voluntary measures to reduce emissions from their grinding operations beginning in late September 2013, nickel levels decreased. Voluntary measures implemented at CFW are summarized in Figure 1-3 below.

Figure 1-2: Nickel (ng/m^3) from Site #2

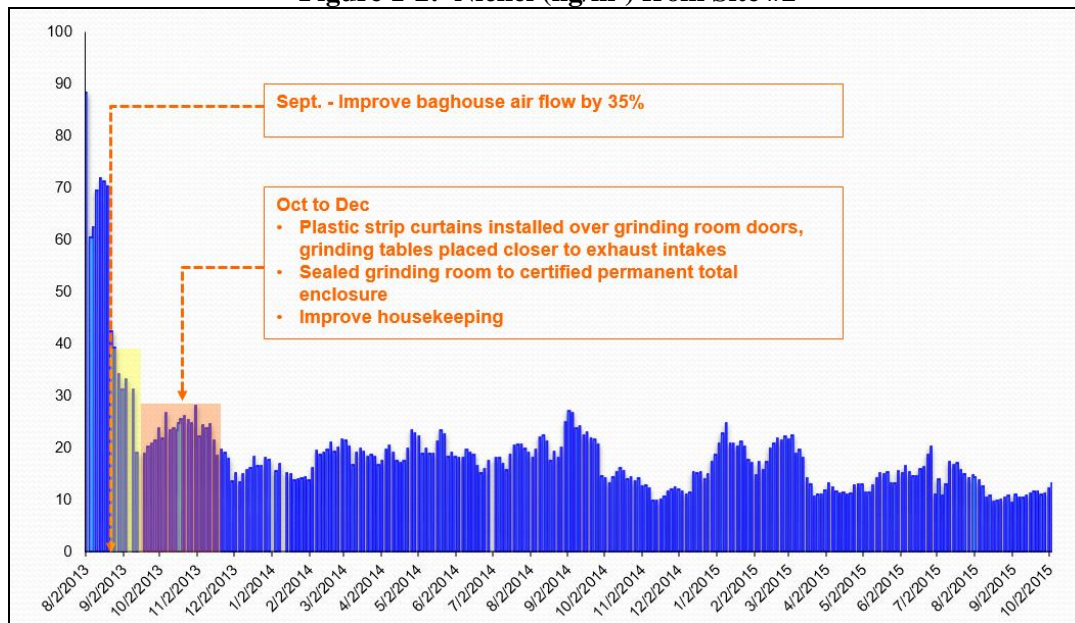
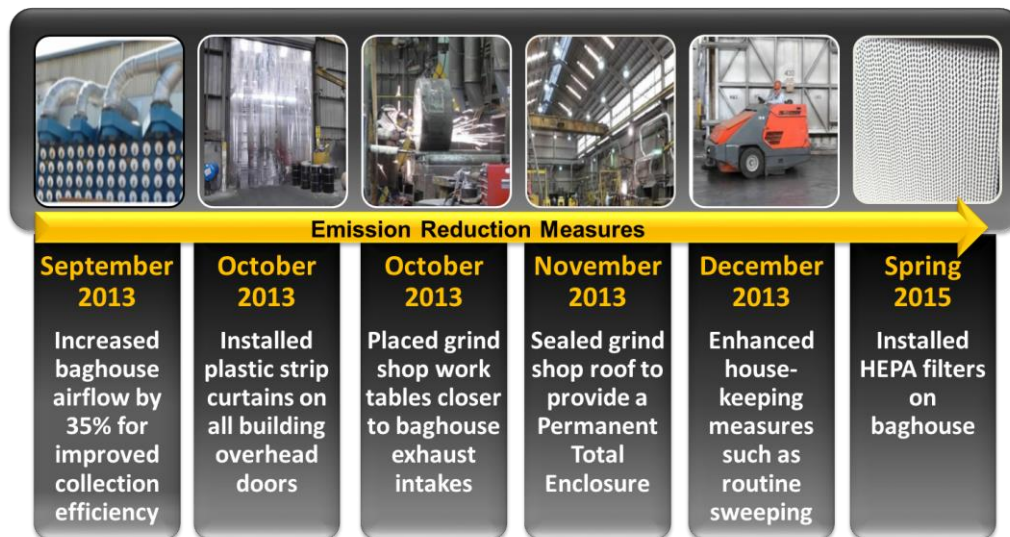
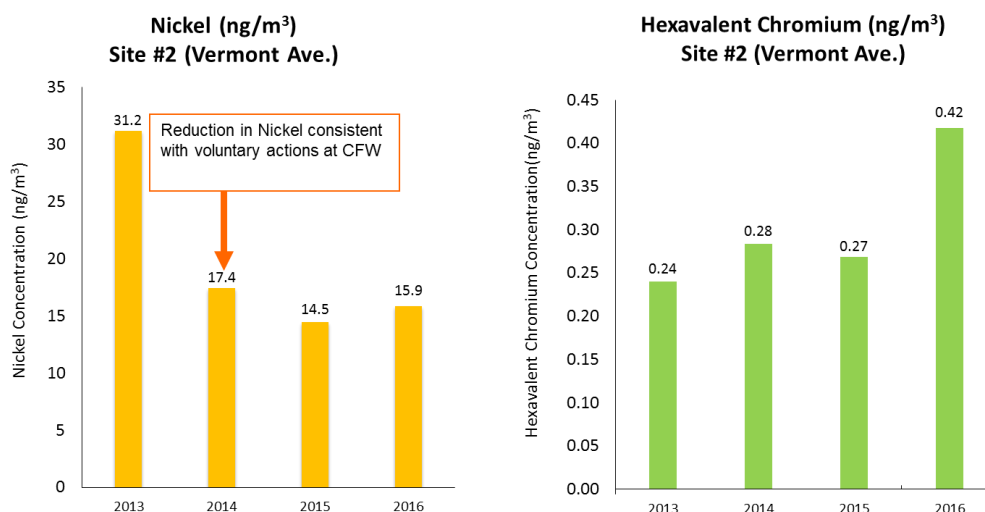


Figure 1-3: Measures Implemented at CFW

As shown in Figure 1-4, average hexavalent chromium levels at Site #2 did not follow the same pattern as the nickel levels. For example, where the nickel levels decreased after 2013, hexavalent chromium levels did not, which indicated that hexavalent chromium could be originating from an operation other than grinding within CFW or possibly a different facility. In addition, in 2016 Site #2 showed an increase in hexavalent chromium levels. As a result, SCAQMD staff began investigating potential sources of hexavalent chromium at CFW as well as other facilities that could be contributing to the increase.

As part of its efforts to understand the hexavalent chromium levels found at Site #2, in October 2016, SCAQMD staff expanded its air monitoring efforts and found elevated levels of hexavalent chromium near CFW that were less than 1 ng/m³, but still at a level where additional investigation is needed. SCAQMD staff temporarily suspended its investigation near CFW, as resources were needed to address substantially higher levels of hexavalent chromium that were found further south of CFW. The SCAQMD will be resuming the investigation of source(s) of hexavalent chromium near CFW, and if needed, additional controls will be addressed in a future rule development effort. More details regarding air monitoring near CFW and in the City of Paramount can be found at: <http://www.aqmd.gov/home/regulations/compliance/air-monitoring-activities>.

Figure 1-4:
Average Nickel and Hexavalent Chromium Levels (ng/m³) at Site #2



SAMPLING FROM OTHER METAL FORGING FACILITIES

In addition to the sampling and monitoring done at Carlton Forge Works, SCAQMD staff conducted glass plate sampling on-site at Press Forge, Weber Metals, Inc. and Schlosser Forge. Glass plates are typically left at location for a period 7 consecutive days. Although the deposition plate results cannot determine ambient concentrations, they provide a good indication of gradients and the extent of potential off site impacts. Glass plates sampling was conducted at Schlosser Forge, Press Forge, and Weber Metals, Inc. in May 2014.

Glass plates were placed near buildings or roof tops where grinding operations were occurring to collect metal particulate. The results of the glass plate samples showed that PM concentrations from the three other forging facilities were as substantial or more substantial, than the PM concentrations found at CFW prior to implementing measures to reduce emissions from their grinding operation. The glass plate samples also confirmed the presence of a variety of metal particulates, some of which are toxic such as arsenic and nickel. The glass plate samples also showed the presence of chromium, but did not distinguish the type of chromium such as hexavalent or trivalent chromium.

The mass concentrations of metals observed at Weber Metals, Inc. and Press Forge demonstrated similar results to CFW. All three sites had significant mass concentrations of heavy metals. The highest concentrations were detected on the roof of Press Forge's grinding station where outdoor grinding with no pollution controls were occurring. In late 2016, Press Forge moved their grinding operations in a temporary enclosure with pollution controls. Weber Metals also had high concentrations of heavy metals with values exceeding those measured at CFW. The presence of heavy metals, some of which are toxic air contaminants, in high concentrations at other metal forging facilities indicate that fugitive metal particulates were not exclusive to grinding operations at CFW.

**Figure 1-5:
Glass Plate Sampling at Metal Forging Facilities (2014)**

	Location Description	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mn	Mo	Ni	Pb	Sb	Sn	Sr	Ti	V	Zn
Carlton Forge	Roof of grinding room	6.81	418	18,500	2.12	555	607	665	35,300	6,220	430	217	3,340	89.8	7.98	33.1	181	2,320	134	1,300
	West side of roof of saw bldg	6.98	491	19,300	2.37	761	815	815	33,500	7,260	449	287	4,500	130	9.71	31.9	205	2,390	130	1,330
	East side of roof of saw bldg	7.09	521	18,000	2.43	556	661	624	26,200	6,870	391	279	3,620	94.3	9.53	31.2	215	2,470	118	1,500
	Roof of Residence across street from facility	7.63	547	21,700	1.99	258	358	746	27,100	7,690	438	149	1,750	133	10.3	42.8	185	2,290	96.8	1,270
	Top of fence along perimeter of parking lot	8.29	583	20,700	1.51	146	234	271	28,200	8,810	470	89.8	1,020	99.6	14.3	30.7	207	2,120	82.1	1,140
Weber Metals	Site #1 Roof of Bldg O	16.3	513	34,400	1.66	17.1	98.4	450	28,000	12,000	467	37.3	172	91.2	9.24	20.4	229	2,730	302	1,720
	Site #2 Open area next to tracks	17.4	2,370	35,100	1.39	17.6	160	578	71,500	12,500	637	35.5	215	98.7	6.92	21.8	272	2,720	237	1,630
	Site #4 Top of Transformer at North perimeter of facility	10.5	453	29,500	1.89	18.7	310	731	42,300	7,200	454	163	862	100	10.9	74.3	241	8,710	568	2,110
	Site #5 Roof of Bldg P	9.62	521	28,600	1.53	20.9	224	632	36,100	9,160	606	67.2	508	99.8	8.54	35.1	204	12,500	736	1,790
	Site #6 Top of Patio adjacent to Bldg L	6.98	575	31,100	2.37	13.5	86.8	654	27,700	7,060	398	23.8	151	211	87.5	89.8	184	1,850	75.8	2,080
Press Forge	Site #7 Roof of storage shed at Promise Hospital	18.3	495	14,300	3.14	48.9	1,990	997	161,000	6,690	1,130	995	5,810	89.3	12.1	77.6	167	10,200	683	864
	Site #1 Roof of outside grinding station	6.61	59.3	5,780	4.67	1,340	5,070	722	194,000	1,710	1,190	1,640	18,200	15.3	0.08	6.1	63.3	7,150	774	154
	Site #2 Roof of larger outside grinding station	8.46	38.2	3,080	6.53	791	5,140	786	197,000	1,010	1,230	2,290	18,600	14.7	0.15	7.7	51.5	7,030	919	81.1
	Site #3 Adjacent to Forge Building	12.5	333	17,200	2.4	60.1	1,170	364	116,000	4,980	835	634	4,110	55.2	5.4	85	153	9,770	794	746
	Site #4 Adjacent to 2 nd Forge Building	9.65	481	20,600	2.6	36.2	224	247	39,100	8,570	532	125	757	618	9.3	503	183	2,840	136	1,170
Schlosser	Site #5 North Perimeter of facility	9.73	527	20,300	3.26	31.3	181	437	32,700	7,910	473	55.1	430	414	10.3	18	179	2,510	109	1,150
	Site #6 Adjacent to Eng Building	11.2	344	19,900	2.64	34.1	711	292	79,400	5,650	707	380	2,730	81.3	6.9	62	164	6,220	440	894
	Site #7 Storage shed at Promise Hospital	13.9	430	20,400	3.66	83.2	1,260	468	105,000	7,070	838	769	4,340	70	8.6	112	184	9,510	643	769
	Admin Bldg roof	38.4	591	25,062	3.4	329	574	641	44,791	7,607	1,133	667.8	2040	106.4	12.2	31	189	1,965	85.02	1,884
	Roof of container adjacent to bldg 4	15.3	450	27,871	4.35	1797	2785	635	59,792	6,288	1,170	1505.7	12434	90.78	5.33	20.2	181	2,716	142.9	1,861
Schlosser	Southeast end of grinding room	20.5	444	25,233	2.65	1072	774	503	36,556	6,027	1084	527.36	7277	107.1	9.97	21.5	213	2,073	99.48	1,751
	Southeast end of grinding room adjacent to emission contr	12.2	248	14,636	4.46	8657	6983	371	27,754	3,531	546	2195.6	58462	48.88	3.81	9.37	148	2,661	149.4	1,035
	On top of modular between bldgs 2 and 3	11.2	243	19,163	3.74	4540	3742	483	34,852	3,631	599	1758.1	31059	46.04	2.3	10	124	1,988	148.3	1,477

NEED FOR PROPOSED RULE 1430

Metal grinding and metal cutting operations are currently exempt from permitting by the SCAQMD and is currently an unregulated source. Through the rule development process, the SCAQMD has obtained additional information about metal grinding and metal cutting operations at forging facilities. As a result, some facilities are currently conducting metal grinding and metal cutting operations with no pollution controls. Other facilities that have pollution controls, are not properly operating and maintaining their pollution controls. During the rule development process, SCAQMD staff has visited many of the forging facilities that will be subject to Proposed Rule 1430. The following are key findings from the site visits:

- Prior to November 2016, there were four facilities that were conducting metal grinding operations in the open air. Because of the fugitive nature of grinding operations, with no containment structure such as an enclosure and no air pollution control device, the metal particulates were being released in the open air and into the community. One of the three facilities recently moved their grinding operations within a building enclosure and is in the process of constructing a total enclosure. Another one of the facilities is in the process of moving their grinding operations within an enclosure also.
- Although air pollution controls were not previously required by the SCAQMD, 14 forging facilities currently have some type of air pollution control device. However, many baghouses did not appear to have proper ventilation, operation, and maintenance of pollution controls.
- Housekeeping measures varied at each facility. There was variation in the cleaning method, such as using brooms to mobile vacuum sweepers, variation in the frequency, and variation in the areas cleaned, such as cleaning the inside and/or outside.

The general action of metal grinding is prone to generate fugitive metal particulate, particularly if the grinding operation is not properly controlled. Proposed Rule 1430 is needed to reduce metal particulate emissions from metal grinding and metal cutting operations at metal forging facilities to ensure that these operations have the appropriate pollution control equipment, are conducted within an enclosure to ensure fugitive emissions that do not make it to the control device are

contained, and basic housekeeping requirements are followed to ensure any accumulation of metal particulate in around grinding operations is not re-entrained into the air or tracked outside of the facility.

PUBLIC PROCESS

PR 1430 is being developed through a public process. A working group has been formed to provide the public and stakeholders an opportunity to discuss important details about the proposed rule and provide the SCAQMD staff with important input during the rule development process. The working group and interested parties are comprised of a variety of stakeholders including representatives from industry, consultants, environmental groups, community groups, and public agency representatives. The SCAQMD staff has held five (5) working group meetings. To date, the working group has convened on October 7, 2015, September 14, 2016, October 26, 2016, December 1, 2016, and January 11, 2017. At the request of community representatives, the September and December working group meetings were held in the City of Paramount. A Public Workshop was held on January 19, 2017 to present the proposed rule and receive public comment. Additionally, a Public Consultation meeting was held on January 25, 2017 in the City of Paramount in a format similar to the Public Workshop.

INDUSTRY PROCESS DESCRIPTION

The following paragraphs provide a general overview of the manufacturing processes and emission sources for the industry source category subject to Proposed Rule 1430. Specifically, SCAQMD staff has provided general operation and emissions source information for metal forging.

Industry Process Description – Metal Forging and Billet Cutting

Forging is a manufacturing process where metal is pressed, pounded, or squeezed under great pressure into high strength parts known as forgings. The process is normally performed hot by preheating the metal to a desired temperature before it is worked. Any metal can be forged, however, some of the most common metals include, carbon steel, alloy steel, stainless steel, very hard tool steels, aluminum, titanium, brass, copper, cobalt, nickel, and molybdenum. These metals are found in billets or ingots that are delivered to the respective forging company. The forging industry is composed of plants that: make parts to order for customers (custom forgings), make parts for their own company's internal use (captive forgings), or make standard parts for resale (catalog forgings). Metal forging creates parts that vary in size, shape, and sophistication. Some of the largest customer markets include: aerospace, national defense, automotive, oil industry, agriculture, construction, and general industrial equipment. The applicable NAICS code for these industries are 332111, Iron and Steel Forging, and 332112 Nonferrous Forgings. The following process description reflects the operational characteristics at metal forging facilities.

Process Description

Metal forging is done because it strengthens the material by sealing cracks and closing empty spaces within the metal. The hot forging process will highly reduce or eliminate inclusions in the forged part by breaking up impurities and redistributing their material throughout the metal work. Forging a metal will alter the metal's grain structure creating a material of increased strength.

This makes forging more advantageous than casting or machining. In metal forging operations, a metal ingot or billet is prepared to be the correct pre-dimensions prior to going through forging. This can include cutting, sawing, grinding, or torch cutting.

Preparation for Forging

Billet Cutting or Sawing

A processed metal billet or ingot is received by the metal forging facility. In order to forge the piece of metal, the metal forging facility may need to reduce the size. This is done by cutting or sawing. At the metal forging facility, the unprocessed metal billet or ingot is placed in a sawing machine. The sawing machine is equipped with a blade capable of cutting into a metal billet or ingot at a slow rate. Typically, a continuous flow of metal removal fluid and coolant is supplied where the blade makes contact with the metal. This helps maintain the blade at a cooler temperature with a co-benefit of preventing metal emissions. The metal ingot or billet is cut to the desired dimensions.

Metal Grinding Operations

Irregularities observed on the billet or ingot can be removed via grinding which will create the desired finish and dimensions prior to forging. Based on site visits to the forging facilities, SCAQMD staff identified five categories of metal grinding activities: billet grinding, swing grinding, stand grinding, large and small part grinding, and torch cutting. Based on observations, all of these activities have the ability to generate fugitive metal particulate if not properly controlled. Each of these metal grinding activities are discussed below.

- ***Billet grinding***

Billet grinding consists of large traveling grinders designed to prepare large billets prior to forging. The billet grinder would traverse the entire length of the billet, going back and forth to create the appropriate dimensions. All billet grinders subject to PR 1430 are vented to baghouses without HEPA filters.



- ***Swing grinding***

Swing grinders are rugged, heavy duty grinders with full lateral movement to prepare medium sized billets. An employee manually operates them. Multiple levels of control were observed ranging from a baghouse with HEPA filters to no air pollution controls.



- ***Stand grinding***

Stand grinders are designed for smaller castings and forging. Mounted in a permanent position, utility grinders have a slotting wheel on one end for reaching into recesses of the material. Multiple levels of controls were observed ranging from venting to a baghouse to not venting to any air pollution controls.



- *Large and small grinding*

Hand grinding involves using power tools used for preparing, cutting, grinding, and polishing forgings of various sizes. Multiple hand grinding stations can be in one room or one area. Larger forgings utilize larger hand grinders, while smaller forgings utilize smaller hand grinders.



- *Torch Cutting*

Torch cutting is a process by which metal is preheated with a flame and then oxidized rapidly and removed by a jet of oxygen issued centrally through the preheating flame. Torch cutting in the metal forging industry often occurs using acetylene gas and is used to remove flash (excess metal) from large metal parts that have been forged.



Basic torch cutting equipment consists of two high-pressure cylinders (one apiece for oxygen and acetylene) and two corresponding pressure regulators. A dual-line hose transfers oxygen and acetylene from the regulators to the torch handle. The torch handle can hold a cutting attachment or cutting tip that controls the thickness of metal being cut, along with the gas pressures set at the regulators. Torches that use oxygen and acetylene reach a working temperature of 5,620 degrees F.

- Heating

Metal billets or ingot are heated to the desired temperature prior to and/or during the forging process. The heated metal billet or ingot become malleable and are able to be forged. Aluminum alloys are heated to 800 °F, while titanium and nickel are heated to temperatures between 1700 and 2300 °F. Furnaces range in heating capacity and size, and typically use natural gas for heating. The combustion of natural gas produces NO_x, SO_x, and combustion related PM emissions. The furnaces are regulated under SCAQMD permit process and are evaluated by SCAQMD staff. NO_x is regulated by SCAQMD Rule 1147: NO_x Reductions from Miscellaneous Sources for non-RECLAIM facilities. Facilities with NO_x emissions that exceed more than 4 tons per year can participate in the SCAQMD RECLAIM program. Non-combustion related emissions, such as emissions generated in the oven space of the furnace produced as a result of refractory brick decomposition or off gassing of metals are unknown at this time. Further studies of non-combustion related emissions from metal furnaces are needed.

- Forging

Forging includes pressing, hammering, rolling, or piercing of metal using a mechanical tool. The type of forges discussed herein are drop forge press, hammer press, and ring rollers. During the forging process, a lubricant is applied to facilitate the release of die and forging material.

- *Drop Forge*

It is a forging made in a closed or impression die under a drop or steam hammer. A closed die forging is formed to the required shape and size by machined impression in specifically prepared dies that exert three-dimensional control on the workpiece. Excess metal, known as flash, that did not form in the die will be removed in finishing operations. Open die forging involves the repeated striking of metal in a die to get the desired dimension. The metal piece may be rotated or moved around to get the desired shape.

- *Hammer Press*

It is a forging made by means of a hammer. The action of the hammer is that of an instantaneous application of pressure in the form a sudden blow.

- *Ring Rollers*

A metal ring preform is rolled between two rolls that move toward each other to form a continuously reducing gap.

- *Lubricant*

A liquid or power lubricant is applied to facilitate the release of the die and forged metal. The lubricant can be applied multiple times depending on the forging operation. Visible emissions are observed when lubricants contact the die and forged metal. VOC levels in lubricants are regulated by Rule 1144 - Metalworking Fluids and Direct-Contact Lubricants. Similar to non-combustion emissions from the furnace, emissions from heated process need further study.

Finishing Operations

Following the creation of a forging, physical or chemical methods are utilized to produce dimensional corrections to the forging or perform surface treatment. While preparation operations removed irregularities, finishing operations removed flashing and scale deposits. Methods observed include abrasive blasting, buffing/polishing, sawing and cutting, and grinding.

- Abrasive Blasting

It is a stream of abrasive material that is propelled against a surface under high pressure to alter the surface. The abrasive material can be composed of metal, silica, or other material. The abrasive blasting process is used to smooth or “clean” forged material. Fugitive metal particulates from the forging and shot material may be generated if not adequately controlled. These emissions can be controlled by operating in a blast cabinet or room vented to an air pollution control system. Varying housekeeping measures can be implemented to reduce the accumulation of particles that can become fugitive. SCAQMD permits are required if the volume of the blasting cabinet is greater than 53 ft³. Abrasive blasting is regulated under SCAQMD Rule 1140: Abrasive Blasting.

- Sawing Cutting

It is used to remove portions of forged metal that is not desired in the finished product. This can be flash material or parts of the forging that may be needed to be corrected to meet the correct dimensions.

METAL GRINDING AND CUTTING CONTROL STRATEGIES

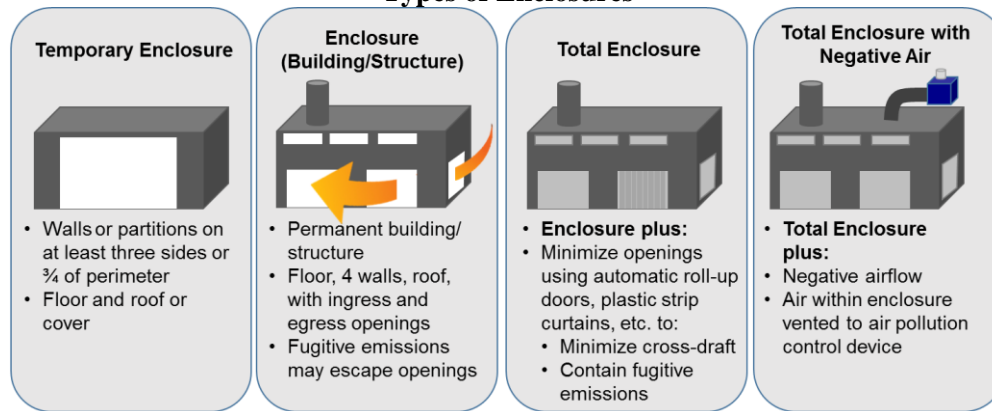
The key emission release points for metal forging facilities' metal grinding and cutting operations are point source emission stacks and fugitive emissions. PR 1430 looks to minimize and control these emissions. Uncontrolled grinding or cutting done in the open air is of greatest concern. Emissions are generated at the point of contact where the abrasion or removal of metal occurs. Metal particulates get entrained in the air and are dispersed based on fall-out and dispersion patterns. Additional metal particulates accumulate in metal removal areas. Metal particulates can be tracked out from foot or vehicular traffic. An effective air pollution control system has an effective capture efficiency and effective control technology. Enclosures and capture technology impact the capture rate.

Containment and Collection Strategies

Containment – Enclosures are structures that contain a grinding or cutting operation that can prevent or control the generation of fugitive metal dust. The design of the structure can determine the effectiveness of the enclosure and the collection efficiency of any downstream air pollution control devices. Figure 1-7 shows four types of enclosures: Temporary Enclosure; Building; Total Enclosure; Total Enclosure with Negative Air. The following provides a general description of each of these enclosure types.

- A temporary enclosure is a structure comprised of walls or partitions on at least three sides or three-quarters of the perimeter that has a floor and a roof. As shown in the figure below, one side of the structure may be open.
- A building is a type of enclosure that is a permanent containment structure, completely enclosed with a floor, four walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, and run-off), with openings to allow ingress and egress for people and vehicles.
- A total enclosure is a permanent containment structure, completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, and run-off), with limited openings to allow access and egress for people and vehicles, that is free of breaks, cracks, gaps, or deterioration that could cause or result in fugitive metal dust.
- A total enclosure with negative air that is vented to pollution control equipment is a total enclosure with negative airflow. This total enclosure must meet the industrial ventilation guidelines at each opening and the air within the enclosure is vented to an air pollution control device.

**Figure 1-6:
Types of Enclosures**



Collection – A collection system allows air and PM emissions to be collected. Designing the air pollution control equipment with ventilation consistent with the Industrial Ventilation Guidelines ensures that the metal particulate is being properly captured and delivered to the pollution control equipment. The collection system can target an emission point, such as a grinding station, or can be for the entire volume of the enclosure. The collection system consists of an intake port, ducting, and a device that creates the target to be under negative air. The collection system needs to be properly maintained in order to maintain expected capture efficiency, which includes proper intake flow rate, duct integrity, and proper positioning of the grinding activity to the intake vent.

Point Source Emission Control Technologies

Baghouses, cyclones, electrostatic precipitators, and wet scrubbers are technologies typically used to control PM emissions from processes. These technologies can be connected in series to further control PM emissions and reduce the wear and tear on downstream processes. A bag leak detection system (BLDS) monitors the performance of baghouse functions by detecting early bag leak or malfunction.

- **Baghouses**

Baghouses used for metal grinding and metal cutting operations at metal forging facilities function like a vacuum cleaner with a fan either blowing air from the grinding source through (positive pressure) the filter or drawing air into (negative pressure) the filter. In either case, air pressure is required to force the air through the filter. The pressure drop is a measurement of this difference in pressure between the clean and dirty sides of the filter. Static pressure gauges can be installed at the inlet and outlet of the fabric filter to determine the unit's pressure drop. As the filter medium becomes clogged with metal dust there is more resistance to air flow, resulting in an increased pressure drop. A baghouse consists of the following components: filter media (for example, fabric, etc.) and auxiliary equipment such as the following; filter media housing, filter cleaning device, collection hopper (metal dust collection drum), and fan. Metal dust layers (dust cakes) deposited on the surface of the bags need to be cleaned periodically to prevent excessive increases of pressure drops across the baghouse, which could result in bag leaks and improper baghouse function.

Baghouses are typically cleaned in sections, with jets of counter-flowing air used to blow captured dust off the filter and into a hopper. For many baghouse installations, the baghouse follows a routine cycle with the pressure drop increasing as the bag becomes coated with dust, and dropping back to a baseline value after it is cleaned. Pressure drop measurements determine if the filter media is being properly cleaned and whether the baghouse is operating to manufacturer specifications. Increased pressure drops may indicate that the filter media is becoming clogged by debris and indicate ineffective capture and control of PM emissions. Low pressure drop values may indicate holes in the filter media or a mechanical failure of baghouse components that also result in ineffective capture and control of PM emissions. Pressure drop monitoring coupled with a bag leak detection system is a useful indicator of baghouse performance. Common types of baghouses include reverse-air, pulse-jet and cartridge type baghouses. A reverse air-type baghouse uses a low pressure flow of air to break the dust cake and clean the bags of material build-up. Cleaning air is supplied by a separate fan which is normally smaller than the main stream fan, since only one compartment is cleaned at a time. A pulse jet-type baghouse uses a high pressure jet of compressed air to back-flush the bags. Cleaning is performed while the baghouse remains in operation. Cartridge (cylindrical) type filters have pleated, non-woven filter media supported on a perforated metal cartridge. Due to its pleated design, total filtering area is greater than in a conventional bag of the same diameter, resulting in reduced air-to-cloth ratio, pressure drop, and overall collector size. Too heavily loaded cartridges can either be cleaned by a pulse jet compressed air or replaced with new cartridges. Cartridge type filters have high particle collection efficiency of, at a minimum, 99.9 percent, and are usually used for industrial process handling exhaust gas flow rates less than 50,000 cubic feet per minute.

The National Fire Protection Association has special designations for deflagrations from metal dust. Therefore, metal grinding operations that require baghouse emission control technologies choose reliable, economical and effective means of explosion control such as baghouse explosion suppression, containment and venting. Additional information pertaining to these types of protective measures is available in Chapter 8 of the Industrial Ventilation, A Manual for Recommended Practice for Design 28th Edition, published by the American Conference of Governmental Industrial Hygienists, ©2013.

- HEPA Filters

HEPA filters are classified by their minimum collection efficiency. In general HEPA filters are defined as having a minimum efficiency rating of 99.97% for the removal of 0.3 μm diameter or larger of PM. HEPA filters are best applied in situations where high collection efficiency of submicron PM is necessary, where toxic and or hazardous PM cannot be cleaned from the filter or where the PM is difficult to clean from the filter. Unlike bags or cartridge filters, HEPA filters are not automatically cleaned. When a HEPA filter element becomes loaded with particulate matter, the element is changed out and disposed of as hazardous waste.

HEPA filters are generally installed as the final component in a PM collection system downstream from other PM collection devices such as a baghouse. HEPA filters require pre-filters to remove large PM for dust concentrations greater than 0.03 grams per centimeter squared (g/cm^2) or 0.06 pounds per foot squared (lbs/ft^2). In metal grinding applications at

forging facilities, mechanical collectors (e.g., cyclones or venturi scrubbers), standard baghouse or cartridge filters may be required to reduce larger diameter PM. Some existing metal grinding operations at forging facilities in the South Coast Air Basin vent to HEPA filters, where, the HEPA filters serve as the final component in a PM collection system downstream from a baghouse.

- Cyclone

A cyclone, typically used as a pre-cleaner, does not have a blower mounted or connected to induce the particle-laden exhaust stream. Particles in the gas stream are forced to move toward the cyclone walls by the centrifugal force of the spinning gas. Large particles are removed from the gas stream by inertia and small particles may travel along the gas stream out of the cyclone.

CHAPTER 2: SUMMARY OF PROPOSED RULE 1430

OVERVIEW

PROPOSED RULE 1430

OVERALL APPROACH

Proposed Rule 1430 establishes requirements for all metal forging facilities to reduce fugitive metal emissions coming from metal grinding and metal cutting operations. The requirements include the installation and implementation of point source controls at grinding operations, construction and maintenance of a physical containment, and implementation of housekeeping measures. Point source controls are air pollution control devices that contain or filter metal particulate at grinding operations. Physical containments capture fugitive emissions that are not captured by the point source controls. Instead of particulate being entrained in the air, particulate matter remains in the containment until it is cleaned up. Appropriate housekeeping measures require the cleanup of metal particulate that lands on surfaces in and around facility before it becomes airborne. Due to the variety of control technologies implemented prior to the adoption of PR 1430, interim requirements are established to allow affected facilities time to install and implement the required technology. It should be noted that PR 1430 applies to a previously unregulated source.

PROPOSED RULE 1430

The purpose of PR 1430 is to reduce particulate matter, toxic emissions, and odors from metal grinding and metal cutting operations at metal forging facilities. As previously discussed, metal grinding and cutting operations are currently exempt from SCAQMD permits and are unregulated sources. PR 1430 will establish standards for metal grinding and cutting operations for both point sources and fugitive emission sources. Point sources are addressed through requirements for emission control devices, emission standards, and periodic monitoring. Fugitive particulate emissions are addressed through requirements for total enclosures, housekeeping, and maintenance and repair activities. Additionally, signage, reporting, and recordkeeping requirements are also being proposed to ensure compliance, along with contingency odor measures that would be implemented if there are 4 confirmed odor complaints received within a consecutive six month period.

Purpose and Applicability – Subdivision (a) and (b)

PR 1430 applies to metal forging facilities in the SCAQMD that conduct metal grinding or cutting operations onsite. The proposed rule does not apply to metal grinding or cutting operations that are conducted under a continuous flood of metal removal fluid, or grinding activities conducted to maintain or repair equipment at the facility. Based on SCAQMD staff site visits and analysis of compliance and permitting data, there are currently 22 facilities in the District that have been identified to meet the applicability of the proposed rule. These facilities located in the Basin typically support the aerospace industry and represent a stationary source category where metal grinding and cutting operations are an integral part of the facility's process. Additionally, as discussed in Chapter 1, data from SCAQMD monitors near Carlton Forge Works and glass plate collection samples at other metal forging facilities have shown that metal grinding and metal cutting operations contribute to ambient levels offsite and to the surrounding community. After the implementation of voluntary emission reduction controls at Carlton Forge Works, significant reductions of various metals, particularly nickel were observed.

Definitions – Subdivision (c)

PR 1430 includes definitions of the following terms used in the proposed rule. Please refer to subdivision (c) of PR 1430 for the definitions:

- Bag Leak Detection System
- Billet
- Billet Grinding
- Building
- Capture Velocity
- Confirmed Odor Complaint
- Duct Section
- Effective Zone
- Emission Collection System
- Emission Control Device
- Fugitive Metal Dust
- Hand Grinding
- High Efficiency Particulate Arrestors (HEPA)
- Maintenance and Repair Activity
- Metal
- Metal Cutting Operation
- Metal Forging Facility
- Metal Grinding Operation
- Metal Removal Fluid
- Small Part Grinding
- Stand Grinding
- Swing Grinding
- Temporary Enclosure
- Torch Cutting
- Total Enclosure

Requirements

Subdivisions (d) through (n) establish requirements for enclosures, point source emission limits for particulate matter, filter media for final stage emission controls, source testing, housekeeping measures, maintenance and repair activities, monitoring of emission control devices, recordkeeping, signage, permit application submittals for existing grinding and cutting operations, and provisions to ensure continuous compliance. Appendix 1 establishes requirements for periodic smoke tests to determine capture efficiency for ventilation systems of emission control devices.

Subdivision (d) – Total Enclosures

Upon adoption of PR 1430, metal forging facilities will be prohibited from conducting any metal grinding or metal cutting operations, or small part grinding outside of a temporary enclosure, building, or total enclosure. As there were no prior requirements for containment of these operations within any type of enclosure, one of the primary objectives of PR 1430 is to have all facilities ultimately conduct metal grinding or cutting within a total enclosure. Metal forging facilities currently conduct metal grinding and metal cutting operations in a variety of enclosures

with some facilities not conducting metal grinding or cutting inside any type of enclosure at all. Therefore, there are two compliance paths depending on whether or not the facility currently conducts metal grinding or cutting inside an existing building as of date of rule adoption.

All metal grinding and metal cutting operations will be required to be conducted in a total enclosure that minimizes the release of fugitive metal dust emissions from passages, doorways, and bay doors by installing automatic roll-up doors, plastic strip curtains, or vestibules for doors and openings of the total enclosure. Alternative methods to minimize the release of fugitive metal dust from the total enclosure may be used if the owner or operator can demonstrate to the Executive Officer (an) equivalent or more effective method(s). The total enclosure shall be completed:

- No later than 6 months after rule adoption for facilities conducting metal grinding or metal cutting operations in a building (as of date of adoption) that is to be modified to a total enclosure for compliance with the proposed rule; or
- No later than 12 months after rule adoption, if a new total enclosure is constructed to meet the provisions of paragraph (d)(2), provided the owner or operator provides written notice to the Executive Officer within 60 days after rule adoption, that a new total enclosure will be constructed.

Facilities that do not have existing buildings for metal grinding or cutting operations prior to date of adoption, or intend to build a new building, are given additional time to erect a total enclosure as it may take additional time to secure the necessary permits and construct the total enclosure. Provided an owner or operator with an existing building notifies the Executive Officer within 60 days of rule adoption that they will be constructing a new total enclosure (building), the proposed rule will allow 12 months to complete construction of the new total enclosure. Throughout the rulemaking process, the SCAQMD staff became aware that there are some facilities that although they currently are grinding in a building, may elect to house all grinding operations in a single structure and may opt to construct a new total enclosure. During the interim, the owner or operator would still be required to conduct their grinding operations in the existing building until the new total enclosure was completed.

Until the total enclosure requirements of the rule are met, the owner or operator shall conduct metal grinding and metal cutting operations in a temporary enclosure or a building. A temporary enclosure means a structure comprised of a floor, roof, walls and or partitions on at least three sides or three-quarters of the perimeter that surrounds areas where metal grinding or metal cutting operations are conducted. During this time period, the facility shall limit the amount of fugitive metal dust by more frequent and rigorous housekeeping procedures. In addition to the housekeeping provisions specified for total enclosures, the owner or operator will be required to conduct, after or at the end of each operating shift, wet cleaning or HEPA vacuuming of: floors within 30 feet of metal grinding and metal cutting work station(s), floors within 40 feet of an entrance/exit for the temporary enclosure or building, and floors of temporary enclosure or building areas where metal grinding or metal cutting operations occur.

All enclosure types shall be designed in a manner that does not conflict with requirements set forth by the Occupational Safety and Health Administration (OSHA) or the California Division

of Occupational Safety and Health (CAL-OSHA) for worker safety. To ensure that total enclosures are maintained and effective, the owner or operator shall inspect any total enclosure once a calendar month for breaks, cracks, gaps or deterioration that could cause or result in fugitive metal dust. PR 1430 requires prompt repairs of total enclosures, which will lower the potential release of fugitive metal particulate dust to the open air. Any breaks, cracks, gaps, or deterioration from any total enclosure that could cause or result in fugitive metal dust shall be repaired within 72 hours of discovery. The Executive Officer may approve a request for an extension beyond the 72 hours if the request is submitted before the 72-hour time limit, and the facility can substantiate that the repair will take longer than 72 hours or equipment, parts, or materials needed for the repair cannot be obtained within 72 hours. If upon inspection the owner or operator discovers a break, crack, gap or deterioration *that results* in fugitive metal dust, the owner or operator shall immediately stop metal grinding and cutting operations. However, the owner or operator may resume operations within the 72-hour repair period if temporary measures are implemented that ensure no fugitive metal dust results from the break, crack, gap or point of deterioration.

To provide further protection to nearby sensitive receptors, PR 1430 will require some facilities to install total enclosure with negative air by venting it to an emission control device that meets the requirements of subdivision (e) no later than 6 months after a Permit to Construct for the emission control device is issued by the Executive Officer. A total enclosure with negative air will be required for a facility if the property line of the facility is located:

- Within 500 feet of the property line of any residence including private homes, condominiums, apartments, and living quarters; daycare centers; health care facilities such as hospitals or retirement and nursing homes; long-term care hospitals, hospices, prisons, and dormitories or similar live-in housing; or
- Within 1,000 feet of the property line of any public or private school, including juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including kindergarten and grades 1 through 12, inclusive; and early head start schools, head start schools, and preschools. This provision does apply to any private school in which education is primarily conducted in private homes.

The distance of 500 feet was selected for “sensitive receptors” (not including types of schools), and is based on the CARB’s 2005 “Air Quality and Land Use Handbook: A Community Health Perspective.” Modeling and monitoring studies conducted by CARB show that the localized risk of toxic metal particulates such as hexavalent chromium, diminishes significantly at 300 feet. Based on input from the stakeholder working group from community and environmental representatives as well as input from members from the Stationary Source Committee, the distance to sensitive receptors was expanded from 300 to 500 feet. A distance of 500 feet will provide an extra level of health protection. The handbook also considered the varying levels of fugitive emissions from a facility and the toxicity of the metal particulates, and a distance of 1,000 feet is also recommended as a precautionary measure. Thus the distance of 1,000 feet was selected in PR 1430 as the protective distance for schools, and based on input from community and environmental representatives and teachers, preschools, early Head Start, and Head Start programs were added with schools as these early education entities may not be on school grounds.

Under the proposed rule, the in-draft velocity of the total enclosure with negative air shall be continuously maintained at a minimum of 200 feet per minute at any opening including, but not limited to, vents, windows, passages, doorways, bay doors, and roll-ups, no later than 6 months after a Permit to Construct for the emission control device venting the total enclosure is issued by the Executive Officer. The in-draft velocity of 200 fpm was selected based on U.S. EPA Method 204 – Criteria for and Verification of a Permanent or Temporary Enclosure.

Subdivision (e) - Metal Grinding and Cutting Emission Requirements

The owner or operator of a metal forging facility shall vent emissions from all metal grinding and metal cutting operations to an emission control device no later than 6 months after a Permit to Construct for the emission control device is issued by the Executive Officer. The emission control device shall not exceed a PM outlet concentration of 0.002 grains of particulate matter per dry standard cubic foot (gr/dscf). Additionally, PR 1430 requires that the final stage of any emission control device be fitted with HEPA filters or filter media rated by the manufacturer to achieve a minimum of 99.97% control efficiency for 0.3 micron particles, and designed in a manner that does not conflict with requirements or guidelines set forth by the OSHA or CAL-OSHA regarding worker safety, and the National Fire Protection Association (NFPA) regarding safety. SCAQMD staff selected an outlet concentration limit of 0.002 gr/dscf due to the fact that this level has been achieved in practice by a metal forging facility with the type of emission control device that will be required for compliance with PR 1430. SCAQMD staff also determined that control technology representing 99.97% control efficiency for 0.3 micron particles was achievable at metal forging facilities as multiple facilities were observed to have installed HEPA filters to control fugitive metal particulates from metal grinding operations.

PR 1430 allows a facility to alternatively fit the final stage of any emission control device with filter media rated by the manufacturer to achieve a minimum of 98% control efficiency instead of 99.97% control efficiency for 0.3 micron particles. To qualify for the alternative, the facility must not vent billet grinding, swing grinding, torch cutting, or metal cutting to the subject emission control device; only operate a combination of 10 or fewer hand grinding units or stand grinding stations to the subject emission control device; and toxic emissions from the emission control device shall not exceed the screening levels identified in Table I – Toxic Air Contaminants in SCAQMD Rule 1401 – New Source Review of Toxic Air Contaminants, or does not result in a risk of over 1 in a million using the most recent SCAQMD Risk Assessment Procedures for Rule 1401. Billet grinding, metal cutting, swing grinding, and torch cutting typically remove large quantities of metals, and generally have the potential to generate more emissions compared to hand or stand grinding. Therefore, a lower efficiency of 98% is being allowed for the generally lower form of grinding in terms intensity and emissions volume. However, the emissions generated from a significant number of hand grinding or stand grinding units may be equal to or more than the amount of metal being removed from metal grinding or metal cutting methods that remove large quantities of metal. Therefore, the alternative is only applicable to metal grinding operations that have 10 or fewer hand grinding units or stand grinding stations.

All emission control devices are required to be operated at the minimum hood induced capture velocity specified in the most current edition of the *Industrial Ventilation, A Manual of*

Recommended Practice for Design, published by the American Conference of Governmental Industrial Hygienists, at the time a permit application is deemed complete with the SCAQMD.

To ensure that the emission collection system for an emission control device will effectively capture metal particulate emissions, within 30 days after rule adoption, the owner or operator of a metal forging facility shall provide permanent visual indicators or markings at all hand grinding, stand grinding, swing grinding, and torch cutting stations that identify the maximum distance metal grinding may occur from the emission control device. Metal grinding activity shall be in front of the hood face and within the area identified by the visual indicators or markings. The air flow shall not be obstructed between the metal grinding operation and the hood for the emission collection system.

PR 1430 also requires the removal of any weather cap installed on any stack that is a source of metal particulate emission within 30 days from rule adoption. The facility is allowed under the proposed rule to instead install a butterfly valve in place of the weather cap. SCAQMD staff has concluded that the weather cap allows for the accumulation of metal particulates that can be dispersed at higher concentrations into the air.

Subdivision (f) – Housekeeping Requirements

The following housekeeping requirements are proposed to minimize fugitive metal particulate emissions. All requirements shall be effective within 30 days after the date of rule adoption.

- For metal grinding operations and metal cutting operations, semi-annual wet cleaning or HEPA vacuum of roof tops for total enclosures that house areas associated with metal grinding or cutting operations.
- For metal grinding operations, metal cutting operations, and small part grinding operations, conduct daily wet cleaning or HEPA vacuum of:
 - a. areas where metal containing wastes generated from metal grinding or metal cutting operations are stored, disposed of, recovered or recycled;
 - b. floors within 20 feet of metal grinding or cutting work station(s);
 - c. floors within 20 feet of any entrance/exit point for a temporary enclosure, building, or total enclosure; and
 - d. floors within 10 feet of an emission control device dedicated to metal grinding or metal cutting operations.
- The owner or operator of a metal forging facility that conducts metal grinding operations, metal cutting operations, or small part grinding shall also implement the following housekeeping measures:
 - a. Monthly wet cleaning or HEPA vacuum of ground surfaces of a temporary enclosure, building, or total enclosure areas where metal grinding or metal cutting operations occur.
 - b. Store all materials capable of generating any amount of fugitive metal dust including, but not limited to, metal containing waste generated from the housekeeping requirements and the maintenance and repair activities (see below), in sealed containers, unless located within a total enclosure
 - c. Compressed air cleaning or dry sweeping operations shall not be conducted within 30 feet of any metal grinding or metal cutting operation, unless the compressed air

cleaning operation or dry sweeping is conducted under an emission control device pursuant to subdivision (e).

Subdivision (g) – Maintenance and Repair Activity

As defined in subdivision (c), “maintenance and repair activity” means any of the following activities conducted outside of a total enclosure that generates or has the potential to generate fugitive metal-dust:

- a) Maintenance or repair activities on any emission control device that vents metal grinding or cutting operations; or
- b) Replacement or removal of any duct section used to vent metal grinding or cutting operations.

It should be noted that PR 1430 does not require maintenance and repair activities to be conducted within any type of enclosure.

No later than 30 days after date of rule adoption, the following measures must be implemented when conducting maintenance and repair activities on any emission control device that vents metal grinding or cutting operations or replacement or removal of any duct section, used to vent metal grinding or cutting operations.

- No later than one hour after completion of any maintenance or repair activity, the owner or operator of a metal forging facility shall wet clean or HEPA vacuum the floors within 20 feet of where the maintenance or repair activity was conducted.
- Any maintenance and repair activity shall be stopped immediately when instantaneous wind speeds are ≥ 20 mph, unless the activity is being conducted within a building or temporary enclosure. Maintenance or repair work may be continued to prevent the release of metal particulate emissions.
- Wet clean or HEPA vacuum all metal-contaminated equipment and materials used for any maintenance and repair activity immediately after completion of work in a manner that does not generate fugitive metal dust

Subdivision (h) – Source Tests

PR 1430 will require an annual source test for PM emissions once every 12 months to demonstrate compliance with the particulate emission standard of 0.002 grains per dry cubic foot. If an annual source test demonstrates that PM emissions were no more than 50% of the PM emission standard of 0.002 gr/dscf, the next test for PM emissions from that emission control device may be performed no later than 24 months after the date of the most recent source test.

Source testing for multiple metals, including hexavalent chromium is also required. A source test for multiple metal emissions will be required once every 48 months to be harmonious with the AB2588 quadrennial cycle for evaluating health risk. However, if the facility demonstrates that all baghouse catch samples for metal grinding or metal cutting operations contain total chromium concentrations of 1% or less by weight during the removal or disposal of any baghouse catch as determined by a metals analysis by X-ray fluorescence, the owner or operator is not required to conduct source test for hexavalent chromium emissions once every 48 months.

Proposed Rule 1430 requires facilities to measure the pressure across the HEPA filter. If the monitored pressure across the filter is outside of the acceptable range for a 4-hour time period on 3 or more separate days, or any consecutive 24-hour period, the owner or operator is required to perform the following source tests within 60 days after the continuous data acquisition system indicated the pressure across the HEPA filter was not maintained:

- Source test for PM emissions
- Source test for multi-metal emissions; and
- Source test for hexavalent chromium unless the facility conducts metal analyses that demonstrate all bulk samples from the baghouse catch are no greater than a concentration of 1% by weight for total chromium.

Facilities with an existing, SCAQMD-permitted metal grinding or cutting emission control device in operation before the date of rule adoption shall submit a source test protocol no later than 60 days after the date of rule adoption. Subsequent source test protocols for source tests conducted after the initial source test shall be submitted no later than 90 days prior to the compliance deadline to conduct the next source test. Metal forging facilities with a new or modified metal grinding emission control device with an initial start-up date on or after the date of rule of adoption, shall submit a source test protocol for initial source to demonstrate compliance no later than 30 days after initial start-up. Subsequent source test protocols for source tests conducted after the initial source test shall be submitted no later than 90 days prior to the compliance deadline to conduct the next source test. The initial source test protocol may be used for subsequent source tests if there are no changes.

Source test protocols shall include the source test criteria of the end user and all assumptions, required data, and calculated targets for testing the following:

- Target particulate mass emission standard;
- Preliminary target pollutant analytical data;
- Planned sampling parameters; and
- Information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

The owner or operator of a metal forging facility shall conduct the source test for an emission control device no later than 60 days from approval of the source test protocol, unless otherwise approved in writing by the Executive Officer. The owner or operator shall notify the Executive Officer in writing 10 calendar days prior to conducting any source test, and notify the Executive Officer within three business days (Monday through Friday) of when the facility knew or should have known of any source test results that exceeds any of the emission standards. Notifications shall be made to 1-800-CUT-SMOG and followed up in writing to the Executive Officer with the results of the source tests within seven business days of notification.

The Executive Officer may approve a request for an extension of the compliance deadline for source tests to be conducted if the facility can demonstrate that it timely filed a complete source test protocol and associated information, and is unable to meet the deadline due to reasons beyond the facility's control. The request shall be submitted no later than 30 days before the compliance deadline.

The rule lists the following applicable test methods which are required to be conducted representative of typical operating conditions:

- SCAQMD Method 5.1 – *Determination of Particulate Matter Emissions from Stationary Sources Using a Wet Impingement Train*
- SCAQMD Method 5.2 – *Determination of Particulate Matter Emissions from Stationary Sources Using Heated Probe and Filter*
- SCAQMD Method 5.3 – *Determination of Particulate Matter Emissions from Stationary Sources Using an In-Stack Filter*
- CARB Test Method 436 – *Determination of Multiple Metal Emission from Stationary Sources*
- U.S. EPA Method 306 – *Determination of Chromium Emission from Decorative and Hard Chromium Electroplating and Chromium Anodizing Operations – Isokinetic Method*

The use of an alternative or equivalent test method will be allowed, as defined in 40 CFR 60.2, if approved in writing by the Executive Officer, in addition to California Air Resources Board, or the U.S. EPA, as applicable. The reports from source testing conducted shall be submitted to the SCAQMD in 60 days or less after the completion of the test.

Facilities shall use a test laboratory approved under the SCAQMD Laboratory Approval Program (LAP) for the source test methods cited above. Approved labs under LAP can be found on the SCAQMD website. If there is no approved laboratory, then approval of the testing procedures used by the laboratory shall be granted by the Executive Officer on a case-by-case basis based on SCAQMD protocols and procedures.

Subdivision (i) - Monitoring

Proposed Rule 1430 includes parametric monitoring to ensure proper operation of the pollution control devices. Parametric measurements are generally operational parameters of the air pollution control device that indicates the performance and proper operation of the control device. Parametric monitoring is in addition to source testing and provides a good indicator if there is an issue with the pollution control device in between source testing to ensure continued compliance. As discussed below there are monitoring requirements for the baghouse, HEPA filtration, and air flow.

Baghouse Leak Detection System

PR 1430 requires facilities to apply for a permit to install, operate, calibrate, and maintain a Bag Leak Detection System (BLDS) for each baghouse to comply with the emission standards of subdivision (e) within 60 days of rule adoption for baghouses existing prior to date of rule adoption. The requirements for the BLDS are broader than those found in SCAQMD Rule 1155, because all baghouses subject to PR 1430 will be required to have a BLDS.

Pressure Across the HEPA Filter

The pressure across the HEPA filter of an emission control device shall be continuously measured with a mechanical gauge that is visible and in clear sight of operator or maintenance personnel. Monitoring of the pressure drop across the HEPA filters is an indicator that the filters

are not clogged or do not have leaks that may compromise its efficacy. The monitoring device will be required to:

- Be equipped with ports to allow for periodic calibration in accordance with manufacturer's specifications;
- Be calibrated according to manufacturer's specifications at a frequency of not less than twice every calendar year;
- Be equipped with a continuous data acquisition system (DAS). The DAS shall record the data output from the monitoring device at a frequency of not less than once every sixty (60) minutes;
- Generate a data file from the computer system interfaced with each DAS each calendar day. The data file shall be saved in electronic Microsoft Excel (xls or xlsx) format other format as approved by the Executive Officer. The file shall contain a table of chronological date and time and the corresponding data output value from the monitoring device in inches of water column. The operator shall prepare a separate data file each day showing the 4-hour average pressure readings recorded by this device each calendar day; and
- Be maintained in accordance with manufacturer's specifications.

During the rulemaking process several community representative commented that the proposed rule needed to include provisions to ensure continuous compliance and triggers were needed to encourage facilities to comply with the proposed rule. As a result, staff added provisions for a continuous data acquisition system to track the pressure across the HEPA filter. In addition, provisions for additional source testing were added to the proposed rule in the event the pressure across the HEPA is continually having issues. The averaging time allow sufficient time for the operator to address the issue, before the trigger for additional source testing is required.

Under Proposed Rule 1430, if the pressure across the HEPA filter is maintained within -1/2 times to +2 times the inches of water of the value established during the performance test to demonstrate compliance with the emission limitations for the emission control device based on hourly recordings by the DAS for the averaging periods specified below, the owner or operator shall require additional source testing as discussed in source testing section of this chapter.

- A 4-hour time period on 3 or more separate days over 60 continuous days; or
- Any consecutive 24-hour period.

Verification of Air Flow to Air Pollution Control Device

The corresponding duct static pressure for the minimum hood induced capture velocity for emission control devices shall be accurately measured once per operating day using the measurement procedures specified in the most current edition of the *Industrial Ventilation, A Manual of Recommended Practice for Operation and Maintenance*, published by the American Conference of Governmental Industrial Hygienists, at the time a permit application is deemed complete with the SCAQMD, or any more stringent methods required by OSHA or CAL-OSHA.

In addition, for each emission collection system required to be monitored under PR 1430, confirmation of the capture velocity referenced in paragraph (e)(4) and a periodic smoke test shall be conducted at least once every 3 months. The periodic smoke provides a qualitative test

for owners and operators to help determine whether cross draft conditions or other operations conducted by the facility are affecting the ability of the emission collection system or hood to effectively capture emissions and verification that the air flow to the pollution control device is moving towards the air pollution control device. Smoke test procedures are outlined in Appendix 1 of the proposed rule.

Subdivision (j) – Recordkeeping

PR 1430 will require records be kept to indicate that the facility is compliant with PR 1430. Required records include:

- Monthly records of weight of metal waste collected by the baghouse catch and if applicable, any metal analyses for bulk samples of baghouse catches showing percent by weight of total chromium;
- Monthly records of weight of metal waste collected by housekeeping activities;
- Dates when bags for baghouses, cartridges, or HEPA filters are replaced;
- Records of periodic smoke tests, emission control device inspection and maintenance, housekeeping activities, maintenance and repair activities, and dates and times when the specific activity was completed.
- Logs of reports to the facility regarding odors or other air quality related issues that includes the date, time, name and contact information for the person reporting the issue, source of the issue, and how the issue was resolved.
- Records for the Bag Leak Detection System
- Records of any odor complaint received identifying:
 - The specific source(s) of the odor within the metal grinding or metal cutting operation;
 - How the facility addressed the source(s) of the odor; and
 - How generation of the odor will be avoided in the future.

All records shall be maintained for at least five years and maintained onsite for at least two years. Records shall be made available to SCAQMD personnel upon request.

Subdivision (k) – Signage

Based on input from the community representatives, the wording of the sign has been modified to reference other air quality issues in addition to odors and to have the SCAQMD listed on the sign before the facility contact. As a result, PR 1430 will require facilities to install a sign that says, “TO REPORT AIR QUALITY ISSUES SUCH AS ODORS, DUST, OR SMOKE FROM THIS FACILITY, CALL EITHER THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG OR [*FACILITY CONTACT PHONE NUMBER*].” The sign shall be installed within 50 feet of each entrance of the facility that is visible to the public, and in a location on each side of the facility that is visible to the public. The sign shall measure at least 16 square feet, and display lettering at least 3 inches tall with text contrasting with the sign background.

The California Metals Coalition had expressed and recommended that only the facility contact be listed on the sign, and that the SCAQMD pursue other mechanisms to educate the public on how to report air quality issues such as through town hall meetings and newspaper notices. The SCAQMD has used signage similar to what is required under Proposed Rule 1430 in Rule 403

for dust, Rule 461 for gasoline dispensing facilities, Rule 410 for material recovery facilities, and Rule 1420.1 for large lead-acid battery recycling facilities.

Subdivision (l) – Permit Application Submittals for Existing Metal Grinding or Cutting Operations

Facilities shall submit complete permit applications no later than 60 days after date of rule adoption for all construction and/or necessary equipment for emission control devices, bag leak detection systems, and total enclosures with negative air required by PR 1430.

Subdivision (m) – Odor Contingency Measures

Proposed Rule 1430 includes contingency measures that an owner or operator of a metal forging facility would be required to implement if they received four confirmed odor complaints within a consecutive six month period. Under the proposed rule, a confirmed odor complaint is an occurrence of odor relating to metal grinding or metal cutting operations resulting in a complaint by different individuals from different households, with the source of the odor having been verified by District personnel as coming from a specific operation subject to the rule. An individual may only be counted as one confirmed odor complaint per day.

The objective of this subdivision is to identify measures that an owner or operator can quickly implement to reduce odors from their metal grinding or cutting operations to be more proactive. Under paragraph (m)(1), the owner or operator would be required to implement one odor reducing measure from the list below after being notified by the Executive Officer that the facility has received four confirmed odor complaints:

- Operational changes to reduce odors including, but not limited to, changing ingress and egress openings that may affect the release of odors from a total enclosure, moving grinding stations further from openings within the total enclosure. Implementation of these types of odor reducing measures will be required 60 days after notification by the Executive Officer;
- Process changes to reduce odors, including but not limited to, use of different materials in the grinding element, and materials applied before, during, or after metal grinding or metal cutting operations. Implementation of these types of odor reducing measures will be required 60 days after notification by the Executive Officer;
- Enhancements to the temporary enclosure, building, or total enclosure to reduce odors escaping the total enclosure, including but not limited, to installation of booths or barriers around grinding stations to contain odors from escaping the total enclosure, upgrade openings used for ingress or egress that will provide even greater control of odors escaping total enclosure. Implementation of these types of odor reducing measures will be required 90 days after notification by the Executive Officer; or
- Any other measure or modification, approved by the Executive Officer, that can help to reduce or minimize odors escaping from total enclosure, based on an implementation schedule approved by the Executive Officer.

Within 30 days after completing the implementation of a measure required under paragraph (m)(1), the owner or operator of a metal forging facility shall provide a description of the

measure that was implemented and notify the Executive Officer that implementation of the measure has been completed.

Subdivision (n) – Rule 219 Exemption

As noted previously, metal grinding and cutting operations are currently an unregulated source in the Basin and are exempt from requiring written permit under SCAQMD Rule 219. PR 1430 would eliminate this exemption by stating that as of the beginning date of proposed rule adoption, any equipment subject to PR 1430 for metal grinding or cutting operations and associated emission control devices are to no longer be exempt from the requirement of a written permit pursuant to SCAQMD Rule 219. As of this writing, rule development for Proposed Amended Rule 219 has already been initiated by SCAQMD staff to incorporate changes and additions, including those that will provide consistency with PR 1430.

Appendix 1 – Smoke Test to Demonstrate Capture Efficiency for Ventilation Systems of an Emission Control Device

Appendix 1 specifies the requirements for periodic smoke tests to demonstrate capture efficiency for ventilation systems of emission control devices for metal grinding or metal cutting operations pursuant to subdivision (d). The periodic smoke test requirement of PR 1430 will not be required if performing such test presents an unreasonable risk to safety. An example of such unreasonable risk to safety includes having to conduct a smoke test at collection sites that would be extremely dangerous, if not deadly, for somebody to work in that collection zone. Refer to PR 1430 for detailed information on smoke test procedures.

CHAPTER 3: IMPACT ASSESSMENT

AFFECTED SOURCES

EMISSIONS IMPACT

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

SOCIOECONOMIC ASSESSMENT

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY

CODE SECTION 40727

COMPARATIVE ANALYSIS

AFFECTED SOURCES

Based on site visits conducted by SCAQMD staff, there were 22 metal forging facilities identified to be conducting metal grinding and/or cutting operations onsite. The facilities serve a variety of industries including: aerospace, oil industry, and automotive. The types of metal alloy forged are aluminum, titanium, steel, and varying percentages of alloys. The starting point of the forging process begins with metal billets and ingots. The starting material undergoes multiple steps involving three primary steps of preparation, forging, and finishing operations.

Table 3-1: Metal Forging Facilities Identified to Conduct Metal Grinding or Cutting
Facilities Visited

Independent Forge Co	Schlosser Forge Facility	Schultz Steel
Carlton Forge Works	Pacific Forge Inc	Weber Metals
Quality Aluminum Forge, LLC	Press Forge Co	Firth Rixson
California Drop Forge	Continental Forge	Ajax Forge
Aluminum Precision Products Inc	California Amforge Corp	Valley Forge Acquisition
American Handforge	Chem Tech Industries	Performance Forged Products
Sierra Alloys Co.	Mattco Forge Inc.	MS Aerospace
Aerocraft Heat Treating Co. Incorporated		

While the identified 22 facilities conduct grinding and/or cutting at their facility, the type and amount vary across the metal forging industry. SCAQMD staff conducted site visits at the 22 facilities and observed a variety of grinding operations paired with a variety of air pollution control technologies.

Table 3-2:
Summary of Number of Facilities with Various Types of Grinding Activities

Findings		Number of Facilities
Grinding		
	Dry Grinding Operations	22
	Wet Grinding Operations	2
Sawing		
	Dry Cutting Operations	2
	Wet Cutting Operations	19
Containment Structures for Grinding		
	Grinding Operations within a Total Enclosure	2
	Grinding Operations within a Partial Enclosure (3 walls)	16
	Grinding Operations Conducted Outside an Enclosure	4

Table 3-3:

Summary of Types of Air Pollution Controls for Various Grinding Activities

Existing Grinding Operations and Air Pollution Controls at Forging Facilities				
Types of Grinding Operation	Billet	Swing	Utility	Hand
Total	2	7	9	17
No Control		2	2	9
Vacuum Collection, lubricant, no-baghouse	-	-	2	-
Cyclone	-	-	1	2
Baghouse without HEPA filters	2	4	4	4
Baghouse with HEPA filters	-	1	-	3
Total with Air Pollution Controls	2	5	7	9

EMISSIONS IMPACT

PR 1430 affects 22 metal forging facilities that that conduct metal grinding or cutting operations onsite. Implementation of PR 1430 will reduce both point and fugitive emissions. Quantifying the point source emission reductions is difficult as many sources do not have current source tests and quantifying emission reductions from fugitive sources is difficult. Monitoring data has shown that the implementation of control measures have reduced ambient air concentrations of nickel. The ambient air concentrations of other metal TACs generated from metal grinding and cutting operations will be concurrently reduced as a result of the control measures required under PR 1430.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Pursuant to California Environmental Quality Act (CEQA) Guidelines §15252 and §15070 (14 CCR §§ 15252, 15070) and SCAQMD Rule 110, the SCAQMD has prepared an Environmental Assessment (EA) for PR 1430. The environmental analysis in the Draft EA concluded that PR 1430 would not generate any significant adverse environmental impacts, and therefore no alternatives or mitigation measures are required. The Draft EA has been released for a 30-day public review and comment period from January 10, 2017 to February 10, 2017. Comment letters are being received from the public relative to the Draft EA and responses to the comments will be prepared and included in the Final EA. The SCAQMD Governing Board must review the adequacy of the Final EA, including responses to comments, prior to certification of the EA and adoption of proposed Rule 1430.

SOCIOECONOMIC ASSESSMENT

A socioeconomic analysis will be conducted and released for public review and comment at least 30 days prior to the SCAQMD Governing Board Hearing on PR 1430, which is anticipated to be heard on March 3, 2017.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

PR 1430 is needed to further protect public health by reducing toxic, particulate matter emissions, and odors from dry metal grinding and cutting operations at metal forging facilities. Metal grinding and cutting operations are currently exempt from SCAQMD permits and are an unregulated source. The general action of metal grinding and cutting is prone to generate fugitive metal particulate, particularly if the grinding or cutting operation is not properly controlled. Proposed Rule 1430 is needed to reduce metal particulate emissions from metal grinding and metal cutting operations at forging facilities to ensure that these operations have the appropriate pollution control equipment, are conducted within an enclosure to ensure fugitive emissions that do not make it to the control device are contained, and to ensure basic housekeeping requirements are followed so that any accumulation of metal particulate around grinding operations is not re-entrained into the air or tracked outside of the facility.

Authority

The SCAQMD Governing Board has authority to adopt PR 1430 pursuant to the California Health and Safety Code Sections seq., 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, and 41700.

Clarity

PR 1430 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

PR 1430 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

PR 1430 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD.

Reference

By adopting PR 1430, the SCAQMD Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Section 41700 (nuisance), and Federal Clean Air Act Section 112 (Hazardous Air Pollutants) and Section 116 (Retention of State authority).

COMPARATIVE ANALYSIS

Health and Safety Code section 40727.2 requires a comparative analysis of the proposed rule with any Federal or District rules and regulations applicable to the same source. See Table 3-1 below.

Table 3-4: Comparison of PR 1430 with NESHAP for Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

Rule Element	PR 1430	NESHAP from Area Source Standards for Nine Metal Fabrication and Finishing Source Categories
Applicability	Facilities who own or operate a metal forging facility where metal grinding or metal cutting operations are conducted onsite	Nine metal fabrication and finishing source categories, including iron and steel forging facilities
Outdoor Metal Grinding	Prohibition of metal grinding in the open air	- None
Total Enclosures	<ul style="list-style-type: none"> - Conduct all metal grinding or metal cutting operations within a total enclosure that for containment and minimization of fugitive emissions - Inspect total enclosures once a month - Implement total enclosures with negative air if metal grinding operations are located within 500 feet of sensitive receptor or 1,000 feet of a pre-school, pre-Head Start, Head Start, or school 	- None
Metal Grinding and Cutting Emissions	<ul style="list-style-type: none"> - Vent metal grinding and metal cutting emissions to an emission control device meeting 0.002 grains/dscf - Emission control devices shall be equipped with filters that achieve a 99.97% control efficiency on 0.3 micron size particles; alternatively equip with filters that meet 98% control based on lower volume grinding operations - Requirements for design and operation per <i>Industrial Ventilation Manual</i> - Inspect, operate, and maintain each emission control device pursuant to manufacturer specification 	<ul style="list-style-type: none"> - Capture PM emissions from dry grinding and dry polishing and vent the exhaust to a cartridge, fabric, or HEPA filter - Does not include hand-held or bench-scale devices
Housekeeping Requirements	<ul style="list-style-type: none"> - Semi-annual cleanings of total enclosure roof tops - Daily wet cleaning or HEPA vacuum of areas subject to metal grinding or metal cutting dust - Monthly cleanings of floors of enclosures where metal grinding or metal cutting occurs - Store fugitive metal dust material in containers 	- Minimize excess dust in the surrounding areas to reduce metal fugitive hazardous air particulates
Maintenance and Repair Activity Requirements	- Wet mop or vacuum the floors within 20 feet of where maintenance or repair activity was	- Operate equipment according to manufacturer's specification

Rule Element	PR 1430	NESHAP from Area Source Standards for Nine Metal Fabrication and Finishing Source Categories
	conducted within one hour after completion - Cease maintenance and repair activity if winds \geq 20 mph - Clean by wet wash or vacuum all metal-contaminated equipment immediately after completion	
Source Test	- Annual requirement to source test emission control devices for PM - Option to source test once every 24 months with a source test of 50% or less of PM emission standard - Source test once every 48 months for multiple metals and hexavalent chromium unless total chromium is <1% for each baghouse change out - Provisions for additional source testing if outside of acceptable operating pressure for HEPA filtration - Submit source test protocol and notify the SCAQMD in a timely manner - Conduct source test within 60 days source test protocol approval	- None
Monitoring	- Install, operate, inspect, and maintain a BLDS system pursuant to SCAQMD Rule 1155 - Minimum hood induced capture velocity shall be measured by static pressure once per operating shift - Continuously monitor the pressure across an add-on air pollution control device to ensure the press drop is within -1/2 times to +2 times the inches of water of the value established during the performance test - Periodic smoke test of each emission collection device once every 3 months	- None
Recordkeeping	- Monthly records of metal waste generated from baghouse catch, percent total chromium, and metal waste generated from housekeeping - Dates when bags for baghouses or HEPA filters are replaced - Logs of report to the facility regarding odor or other air quality related issues, including confirmed odor complaints - Maintain smoke test results, emission control device inspection and maintenance, housekeeping activities, and maintenance and repair activities - Maintain BLDS records	- None
Signage	- Install signage that lists contact information in the event of air quality issues including	- None

Rule Element	PR 1430	NESHAP from Area Source Standards for Nine Metal Fabrication and Finishing Source Categories
	odors, smoke, or dust	
Odor Contingency Measures	- Implement odor contingency measures of the proposed rule if the owner or operator receives four confirmed odor complaints relating to the metal grinding or metal cutting operation within a consecutive 6 months	- None

REFERENCES

REFERENCES

Air Pollution Control Technology Fact Sheet, United States Environmental Technology, December 2000, <https://www3.epa.gov/ttnecat1/dir1/ff-hepa.pdf>

“Air Quality and Land Use Handbook: A Community Health Perspective,” California Air Resources Board, April 2005.

EPA Air Pollution Control Cost Manual, Sixth Edition, United States Environmental Protection Agency, January 2003, https://www3.epa.gov/ttnecat1/dir1/c_allchs.pdf

Forging Industry Association, 2016. “Forging Facts”, <https://www.forging.org/forging/forging-facts.html>

Forging Industry Association, 2014. “Infrared Heating of Forging Billets and Dies”, <https://www.forging.org/uploaded/content/media/InfraredHeatingReport.pdf>

Forging Industry Association, 2016, “Glossary of Forging Terms”, <https://www.forging.org/glossary-of-forging-terms>

Library of Manufacturing, 2016. “Metal Forging”, <http://thelibraryofmanufacturing.com/forging.html>

“Staff Report for Proposed Rule 1155: Particulate Matter (PM) Control Devices,” South Coast Air Quality Management District, December 2009.

SCAQMD, 2014. “Air Monitoring at Carlton Forge Works”, <http://www.aqmd.gov/docs/default-source/air-quality/special-monitoring-and-emissions-studies/carlton-forge-works/cfwreport2014.pdf>

SCAQMD, 2014, “Town Hall Meeting Carlton Forge Works”, [http://www.aqmd.gov/docs/default-source/compliance/Carlton-Forge-Works/town-hall-meeting-2014-01-23-\(final\).pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/compliance/Carlton-Forge-Works/town-hall-meeting-2014-01-23-(final).pdf?sfvrsn=4)

SCAQMD, 2016, “Report on Updated Air Monitoring in Paramount Community and Preliminary Assessment of Health Impacts”, <http://www.aqmd.gov/docs/default-source/compliance/Carlton-Forge-Works/report-on-air-mon-paramount.pdf?sfvrsn=6>

Scot Forge, 2016, “Glossary of Forging Terms”, <http://www.scotforge.com/Why-Forging/Glossary#c>

APPENDIX A: RESPONSE TO COMMENTS

**Comment Letter #1
Press Forge Co.
December 5, 2016**

PRESS FORGE CO.

7700 JACKSON STREET • PARAMOUNT, CALIFORNIA 90723
Phone: (562) 531-4962 • Fax: (562) 531-4826

December 5, 2016

Ms. Susan Nakamura (SNakamura@agmd.gov)
Acting Assistant Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4182

SUBJECT: Control of Fugitive Dust Emissions

Dear Ms. Nakamura:

I am the General Manager of the Press Forge facility located in Paramount, CA. South Coast Air Quality Management District is currently developing a proposed Rule 1430 to control metal dust emissions from grinding operations at forging facilities. At your December 1, 2016 meeting about the rulemaking effort, Press Forge was identified as a facility that was conducting grinding outdoors. I wanted to correct the record and make sure that you are aware that Press Forge ceased all outdoor grinding on or before November 10th. While the majority of our grinding has occurred indoors for as long as I have worked at the facility, there was some small hand grinding conducted outside up until that time. That is no longer the case. Now all grinding is conducted indoors with emissions controlled by baghouses and the outdoor hand grinding stations have been permanently removed.

1-1

I also wanted to ensure that you were aware of all the other improvements at the facility to reduce emissions related to our grinding operations. Press Forge is in the process of constructing a new building that will enable us to conduct all hand grinding operations within an enclosed space under negative pressure and certified as a total enclosure. Exhaust from the new hand grinding facility will be routed to baghouses with HEPA secondary filtration. This structure is being built with careful attention to your draft rule language to ensure that we meet or exceed all of the anticipated requirements. We expect the new hand grinding facility to be fully operational by late spring of 2017--well in advance of when the rule could require such upgrades. In the interim, in order to minimize the potential for fugitive dust, we are in the process of implementing the following additional procedures:

1-2

- Prohibiting use of compressed air for cleaning purposes as indicated in Rule 1430
- Prohibiting use of dry sweeping for cleanup as indicated in Rule 1430
- Purchasing additional HEPA vacuums to replace broom sweeping and facilitate housekeeping as indicated in Rule 1430
- Utilization of a mobile wet sweeper in place of the existing mobile dry sweeper
- Limiting cleaning of areas potentially impacted by metal dust to wet methods or HEPA vacuum
- Implementing enhanced maintenance procedures using the HEPA vacuums and wet cleanup to minimize the suspension of dust as well as trackout
- Training our workers on the importance of minimizing fugitive dust emissions

PRESS FORGE CO.

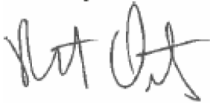
7700 JACKSON STREET • PARAMOUNT, CALIFORNIA 90723

Phone: (562) 531-4962 • Fax: (562) 531-4826

We believe that our process of constant improvement is resulting in positive change and that we are successfully decreasing fugitive dust emissions from our facility. } 1-3

Please let me know if you have any questions.

Sincerely,



Robert Ortiz

cc: Kyle Nelson
Tom Wood

- 1-1 Response:** Thank you for your correspondence. On December 9, 2016, SCAQMD rules staff visited Press Forge Co. and was pleased to see that the hand grinding operation was being conducted in a temporary enclosure with a temporary baghouse.
- 1-2 Response:** During the SCAQMD's visit to Press Forge Co. on December 9, 2016, representatives from Press Forge Co. shared with SCAQMD staff the other improvements that were underway including grading for a new total enclosure to house their grinding operation and HEPA vacuum. The SCAQMD staff encourages Press Forge Co. to continue working towards the many air quality improvements.
- 1-3 Response:** SCAQMD staff agrees that the process of constant improvement is resulting in positive change and will help to reduce fugitive metal particulate.

Comment Letter #2
Independent Lubricant Manufacturers Association
December 9, 2016



400 North Columbus Street, Suite 201
 Alexandria, VA 22314
 p 703.684.5574
 f 703.836.8503
 www.ilma.org
 ilma@ilma.org

December 9, 2016

Via Electronic Mail (SNakamura@aqmd.gov)

Ms. Susan Nakamura
 Acting Assistant Deputy Executive Officer
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, California 91765-4182

Re: Proposed Rule 1430 – Control of Emissions from Grinding Operations at Metal Forging Facilities

Dear Ms. Nakamura:

The Independent Lubricant Manufacturers Association (“ILMA” or “Association”) submits these comments on the South Coast Air Quality Management District’s (“SCAQMD”) pre-rulemaking draft Proposed Rule 1430 - Control of Emissions from Grinding Operations at Metal Forging Facilities. ILMA has participated in the stakeholder meetings on Proposed Rule 1430 and respectfully requests that its suggested modification below be incorporated into the draft rule eventually proposed for public comment.

Introduction to ILMA

ILMA is national trade association with 355 member companies. As a group, ILMA members blend, compound, and sell over 25 percent of the United States’ lubricant needs (*e.g.*, passenger car motor oils) and nearly 80 percent of the metalworking fluids (“MWFs”) utilized in the country.

Independent lubricant manufacturers by definition are neither owned nor controlled by companies that explore for or refine crude oil to produce lubricant base stocks or that produce chemical additives. Base oils are purchased from refiners, who also are competitors in the sale of finished products. Additives are purchased from suppliers, who also may be competitors in the sale of finished products. ILMA members succeed by processing, producing, and distributing high-quality, often specialized, lubricants.

Section (b) – Applicability – Should be More Precisely Defined

Section (b) - Applicability states that “[t]his rule applies to all persons who own or operate a metal forging facility where dry metal grinding or metal cutting operations are conducted. This rule does not apply to metal grinding or metal cutting conducted under a continuous flood of metal removal fluid.”

President, Beth Ann Jones, Hangsterfer's Laboratories, Inc.

Vice President, Dave Croghan, Maxum Petroleum

Treasurer, Barbara Kudis, Allegheny Petroleum Products Company

Secretary, Chuck Decker, American Oil & Supply International LLC

Immediate Past President, Frank H Hamilton III,
 South Atlantic Services, Inc.

Chief Executive Officer, Holly Alfano

General Counsel, Jeffrey L. Leiter

Ms. Susan Makamura
December 9, 2016
Page 2 of 2

ILMA requests that SCAQMD add the following to this section:

A continuous flood of metal removal fluid is defined as direct application of fluid to the tool or work piece interface at a rate that is sufficient to adequately suppress metal dust emissions. Minimum Quantity Lubrication (MQL) is not considered a continuous flood of metal removal fluid since the rate of application is insufficient to suppress metal dust emissions.

} 2-2
cont

Definitions

Additional definitions for “Minimum Quantity Lubrication” and “flood cooling” are needed to improve Proposed Rule. The Association is developing recommended definitions for these terms and will supplement this submission.

} 2-3

* * * * *

ILMA urges SCAQMD to adopt the modification to the applicability section set forth above.

Sincerely,


Holly Alfano
Chief Executive Officer

CC: ILMA's Metalworking Fluids Committee
Jeffrey L. Leiter, Esq.
Daniel T. Bryant, Esq.

- 2-1 Response:** The SCAQMD appreciates ILMA's participation in the rulemaking process.
- 2-2 Response:** Thank you for your comment. The definition of “metal removal fluid” was revised to state that “metal removal fluid excludes Minimum Quantity Lubrication techniques that coat the tool work piece interface with a thin film of lubricant and minimize heat buildup through friction reduction. Minimum Quantity Lubrication fluids are applied by pre-coating the tool in the lubricant or by direct application at the tool work piece interface with a fine mist.”
- 2-3 Response:** The SCAQMD staff looks forward to receiving the additional suggestions.

**Comment Letter #3
Solutions 4 Blast
December 10, 2016**

Solutions 4 Blast

aka Air Cleaning Systems
aka Solutions 4 Industry, Inc.
3633 Pomona Boulevard
Pomona, CA 91768

December 10, 2016

Ms. Susan Nakamura
Acting Assistant Deputy Executive Director
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182

RE: Stakeholder Comments About Proposed Rule 1430

Ms. Nakamura,

I would like to take a moment to comment on proposed Rule 1430. While our company is not directly affected by any rules generated by SCAQMD, we are still impacted. The long term effect of any onerous regulation is a loss of manufacturing companies that cannot afford to upgrade or are tired of the continuous barrage of regulations. This may happen via closure or moving the manufacturing to another state or country. This causes a loss of good paying jobs and affects companies such as ours whose client base is the manufacturers in our region. (It is a fact that previous rules enacted by SCAQMD have caused manufacturers to close or move their operations to other states or countries.) Thus, it is important for a rule to be carefully crafted and the financial impact (to the business and region) carefully considered (because money to pay for upgrades and good paying jobs don't grow on trees).

I became aware of this proposed rule less than two months ago. My immediate gut reaction was two-fold. First, I said this could be good for our business because we sell a lot of the pollution control equipment needed to implement this rule. However, my second reaction was disconcerting... the long term impact of this rule will likely be the loss of more forgers in Southern California. Furthermore, if SCAQMD goes after forgers with this rule, it won't be long before they impose this same rule on other metal working industries which means the loss of more of our client base.

Now, I'm not so naïve as to believe that this letter could possibly make SCAQMD reconsider the implementation of this rule. That would fly in the face of all things bureaucratic. However, I am hoping that I can address a few issues with the rule that I see (as an expert in most things related to dust collection, a person with heavy experience in manufacturing and a concerned business owner) and SCAQMD will consider postponing the implementation of the rule while appropriate investigation and/or studies are performed and these issues are addressed:

Page 3, Paragraph (d)(2)

STATEMENT: shall continue conducting all metal grinding operations in the enclosure until the total enclosure and cross-draft requirements specified in paragraph (d)(3) are met.

ISSUE: No cross-draft requirements are specified in paragraph (d)(3).

Page 5, Paragraph (e)(2)

STATEMENT: The final stage of any emission control device required under paragraph (e)(1) shall be fitted with HEPA filters, or filter media rated by the manufacturer to achieve a minimum of 99.97% efficiency for 0.3 microns.

ISSUES:

1. What determination was used to justify the use of HEPA filtration? While it can easily be argued that HEPA filtration should be used in conjunction with processes that generate particulate from toxic materials, there is no basis for requiring HEPA filtration for the grinding of all metals. In general, the size of grinding dust particulate is considered medium (> 1 micron) to large (> 5 micron), however, the size of grinding dust particulate can vary depending on the following factors:
 - a. Speed of grinding wheel or disk
 - b. Diameter of grinding wheel or disk
 - c. Grade of grinding wheel or disk
 - d. Pressure that the operator or machine is placing on the metal substrate with the grinding wheel or disk.

It is irresponsible to assume that all metals will require HEPA filtration without relevant studies to indicate that a significant particle distribution of the dust falls in the 0.3 micron (or less) range for each type of grinding operation.

The financial ramification on ANY business is onerous. Retrofitting dust collectors with HEPA filtration is very expensive financially (not inclusive of the space required for the HEPA filtration module). On average, the cost per 1000 cfm of dust collector blower will exceed \$500 on a large, stationary dust collector; the cost is far greater for small dust collection systems such as self-contained downdraft tables. Therefore, as an example, a facility that is operating dust collection with cumulative air volume of 50,000 cfm would spend \$25,000 or more to upgrade their dust collectors. The cost for maintaining HEPA filtration can even be worse. Facilities that are still using "baghouse" dust collectors may have to change their HEPA filters 4-6 times per year due to the inherent inefficiencies of baghouse dust collectors. Using the same example, a facility with 50,000 cfm of baghouse dust collection would spend approximately \$6,250 per filter change (or \$25,000 - \$37,500 annually) in HEPA filters. As I mentioned earlier, money doesn't grow on trees.

2. NFPA Standard 484 does not allow HEPA filtration on dust collectors that are used for the collection of combustible metal dusts if the dust collector is located inside a building. In many cases, depending on the operation and the dust collection equipment, it is not possible to locate the dust collector outside the building. While NFPA Standards are not legally enforceable, the insurance industry is forcing many businesses to follow the standards to mitigate potential insurance liability. This leads to a conundrum for the facility:
 - a. Do they follow SCAQMD Rule 1430 and risk losing their insurance?
 - b. OR, do they obey their insurance company and get fined by SCAQMD for non-compliance?

3-3

Page 6, Paragraph (f)(2), (3), (g)(1), (g)(3)

STATEMENT (f)(2): Daily wet cleaning or HEPA vacuum of the following:

(f)(3): Monthly wet cleaning or HEPA vacuum of ground surfaces....

(g)(1): No later than one hour.... facility shall wet clean or HEPA vacuum...

(g)(3): Wet clean or HEPA vacuum all metal-contaminated...

ISSUES:

1. Wet cleaning of combustible metal dust is not advised because the collected wet fines generate hydrogen (a highly combustible gas).

3-4

2. What is the point of HEPA vacuuming of non-toxic metals unless it has been proven that a significant volume of grinding or sawing dust is less than 0.5 micron? [Refer to discussion of Page 5, Paragraph (e)(2)]

3-4
cont

Page 7, Paragraph (f)(4)

STATEMENT: Store all materials Including, but not limited to, metal containing waste generated from housekeeping requirements..... in sealed containers, unless located within a total enclosure.

ISSUE: There is an inherent issue with storing combustible dust (aluminum, titanium, magnesium, mixed metals, etc.) in a sealed container; especially if the dust is wet. This practice inadvertently creates a bomb with potential for severe injury and property damage.

3-5

Page 7, Paragraph (f)(5)

STATEMENT: Compressed air cleaning operations shall not be conducted within 30 feet of any metal cutting or metal grinding operation.

ISSUE: There is no logical basis for this rule unless it is more clearly defined. A person who is using a blow-off gun that consumes 10 cfm of compressed air 5 feet from a grinding or metal cutting will affect the air flow less than the wind blowing in from an open doorway. However, someone using an 1" diameter open air hose (flowing 100 cfm @ 80 psi) thirty feet from the processes will likely cause air turbulence.

3-6

Page 7, Paragraph (g)(2)

STATEMENT: Any maintenance and repair activity shall be stopped immediately.... Unless activity is being conducted within an enclosure, temporary enclosure, or total enclosure.

ISSUE: It is very easy for engineers, consultants and bureaucrats to design, recommend and create regulations that have no practicality in real world applications. Allow me to offer up an example (no matter how ludicrous it may seem, it is a real possibility and shows the impracticability of this paragraph):

- Facility has a dust collector that provides dust control for a dozen grinders.
- Santa Ana winds are blowing at 25 mph with gusts up to 40 mph.
- A metal fatigue breach occurs between the clean air and dirty air side of the dust collector but accessible from the outside of the dust collector. The metal fatigue breach is only two inches long, but the breach 15 feet above ground level. Every time the reverse pulse filter cleaning system pulses, a puff of dust escapes from the dust collector.

3-7

According to proposed Rule 1430, the facility needs to install a temporary enclosure around the breach so that maintenance can grind the paint off around the breach to facilitate a weld, then grind the weld so that the metal can be prepped for coating (to protect against corrosion). Building a temporary enclosure 15 feet off the ground that is "free of breaks, cracks, or gaps" will take at least four hours to facilitate a repair that will likely require less than two minutes of grinding. Meanwhile, production is shut down for four hours. This is the definition of impracticability and a clear cut example of why regulations are stifling business in California. It seems to me that there needs to be an exclusion that allows maintenance and repair activities that require less than ten total minutes of grinding to not require a temporary enclosure.

Page 10, Paragraph (i)(2)

STATEMENT: The minimum hood induced capture velocity specified in paragraph (e)(3) shall be accurately measured by static pressure once per operating shift...

ISSUE: This paragraph of the rule is ludicrous at best and punishing at worst. First, it is possible for a facility to have dozens of hoods and operate three shifts per day. It may require a facility to have one full time staffer assigned to handling the testing and the documentation required by this rule. This could easily cost a large facility more than \$150,000 annually. (Remember that money doesn't grow on trees.)

3-8

Additionally, the hood velocity will vary depending on the static pressure on the entire system. Therefore, as the filters get dirty, there will be a change in velocity at the hood. It is an impossible task for a facility to maintain a uniform hood velocity. An easier, more practical and more cost effective approach would be to require a facility to achieve the desired hood velocity with clean filters in the dust collector in order to complete the permit application. The static pressure of the filters is notated. Once the static pressure across the filters has increased to specific point (typically +2" for cartridge filters), the filters must be changed. If the District wants to have the facility test the hood velocity prior to changing the filters so a baseline hood velocity (with dirty filters) can be established, that would be acceptable. Beyond this, testing hood velocity annually should be sufficient.

3-8
cont

Page 10, Paragraph (i)(3)

STATEMENT: The pressure drop across the HEPA filter within -1/2 times to +2 times the inches of water of the value established during the performance test....

ISSUE: You cannot have a negative value unless there is a breach (which negates the use of a HEPA filter) and a positive value above +1 indicates that the HEPA filters are overloaded.

3-9

Page 11, Paragraph (i)(4)

STATEMENT: For each emission collection system subject to this subdivision, a periodic smoke test shall be conducted, unless performing such test presents an unreasonable risk to safety, at least once every three months...

ISSUES:

1. What is the point of the smoke test? This needs to be clarified.
2. What is the justification that this test needs to be performed every three months? This presents additional unnecessary time, documentation and money to the facility owner.

3-10

Page 11, Paragraph (k)(1)

STATEMENTS:

1. Installed within 50 feet of entrance of facility...
2. Measures at least 16 square feet...
3. Displays lettering at least 3 inches tall...

ISSUE: Has SCAQMD given consideration that these parameters may not meet with local signage code? Which "bureaucracy" takes precedence?

3-11

ADDITIONAL ISSUES:

1. Why are exclusions not included in the proposed rule? How is a facility owner, concerned business or concerned citizen supposed to know the full extent of the rule if the exclusions are not included? I think that the proposed rule needs to be reissued with exclusions included and a reasonable amount of time allocated for comments and questions of the complete proposed rule.
2. In creating a rule, SCAQMD does not necessarily apply science in creating the rule. For example, it was arbitrarily determined that all dust collection in Rule 1430 must have HEPA filtration, yet there is no justification for it given that many facilities are not working with toxic metals and there is no particle size distribution testing done to indicate that much if any of the grinding dust generated is finer than 0.5 micron (a standard for most cartridge filters).
3. In creating a rule, SCAQMD does not take adequate consideration of the following:
 - a. Financial impact on the business that must comply with the rule
 - i. Capital equipment and building expenditures
 - ii. Implementation, operation, monitoring and record keeping labor costs
 - iii. Annual maintenance costs
 - iv. Ability to be able to compete with competitors in other states

3-12

- b. Rule conflicts with local codes (building, signs, etc.)
- c. Rule conflicts with other regulations or standards
 - i. Cal-OSHA
 - ii. OSHA
 - iii. NFPA

3-12
cont

Ms. Nakamura... I can appreciate the desire for SCAQMD to provide a service to the region by improving the air quality. However, it is incumbent upon your organization to provide concise rules that do not adversely affect business to the extent that they cannot financially compete in the market place thereby shutting down or leaving the state. When this happens, our air might be cleaner, but there are fewer working people able to enjoy this clean air. We do not need new rules for the sake of justifying a bureaucracy and the rules need to be tempered with the clarity of financial impact on the individual businesses and industry as a whole.

3-13

I would appreciate it if you would add me to your mailing list (lnord@solutions4blast.com). Please don't hesitate to contact me if you have any questions or comments.

Respectfully,



Lance Nord
President

3-1 Response: As SCAQMD staff started the rule making process for Proposed Rule 1430, it became very apparent that the metal grinding operations at metal forging facilities can be a very intense operation with billet grinders, swing grinders, and multiple hand grinders. These grinding activities are currently unregulated. As a result, when the rulemaking began there were four metal forging facilities that were conducting their grinding operations in the open air with no pollution controls. Although some facilities did have pollution controls, there are no permit conditions to ensure that the pollution controls are adequately sized, has the proper ventilation, or any source testing or other monitoring to ensure proper operation and maintenance. Unfortunately, the community that surrounds these facilities are impacted from fugitive metal particulate emissions from these sources.

The SCAQMD staff is always sensitive to the cost of compliance. The average annual cost is estimated to be about \$345,000. Larger facilities will experience higher costs. The SCAQMD staff has prepared a socioeconomic analysis for Proposed Rule 1430.

3-2 Response: The proposed rule has been modified to remove the reference to “cross-draft.” Paragraph (d)(2) requires that “...all metal grinding or cutting operations in the building until all the requirements specified in paragraph (d)(3) are met. Paragraph (d)(3) has specific requirements for the total enclosure.

- 3-3 Response:** SCAQMD staff has completed a socioeconomic analysis for Proposed Rule 1430 that determined the capital investment cost for an emissions control system with a cumulative air volume of 50,000 CFM and HEPA filtration would be approximately \$540,000 with an additional annual operating cost for HEPA filtration of approximately \$78,000. This value exceeds the commenter's estimated compliance cost for HEPA and has been accounted for in the socioeconomic analysis conducted to assess the cost impacts of Proposed Rule 1430.

Based on discussions with another pollution control provider, HEPA filters with a baghouse can be safely designed. To ensure there is no conflict with SCAQMD's proposed rule and the National Fire Protection Association, Proposed Rule 1430, paragraph (e)(2) has been modified and states that, "The final stage of any emission control device required under paragraph (e)(1) shall be fitted with HEPA filters, or filter media rated by the manufacturer to achieve a minimum of 99.97% control efficiency for 0.3 micron particles, and designed in a manner that does not conflict with requirements or guidelines set forth by the OSHA or CAL-OSHA regarding worker safety, or the National Fire Protection Association regarding safety."

- 3-4 Response:** Housekeeping provisions are an effective tool to ensure that fugitive dust is not tracked or is not re-entrained where it can impact off-site neighbors. As discussed in Chapter 1, ambient air monitors and glass plate samples have shown the presence of a variety of metal particulates, some of which are toxic such as nickel, cadmium, and arsenic. The SCAQMD staff believes that the housekeeping measures are needed to minimize fugitive dust.
- 3-5 Response:** Proposed Rule 1430 does not require that the metal containing waste be stored in a sealed container. Under Proposed Rule 1430, the operator can either store metal containing waste generated from housekeeping in a sealed container or in any container, provided the container is within a total enclosure.
- 3-6 Response:** The overall objective of this provision is to minimize the opportunity for fugitive dust to become airborne. Under Proposed Rule 1430, compressed air is allowed if the compressed air cleaning operation or dry sweeping is conducted under an emission control device.
- 3-7 Response:** Proposed Rule 1430 does not require an operator to install a temporary enclosure to conduct maintenance and repair activities. The proposed rule does specify that if certain maintenance and repair activities on the pollution control devices are being conducted outside of an enclosure, that specific housekeeping provisions must be implemented.

- 3-8 Response:** Measuring the static pressure is a quick measurement. Staff has modified this provision to requirement to require that the static pressure be measured once per day, instead of once per shift.
- 3-9 Response:** The point of measuring the pressure drop across the HEPA filter is to identify a breach or if the HEPA filter is overloaded.
- 3-10 Response:** The SCAQMD staff has found that smoke tests are an inexpensive tool to ensure that the air flow is appropriately moving towards the pollution control device. Use of smoke tests has been required under other metal working rules such as Rule 1469 for metal plating facilities, and Rules 1420.1 and 1420.2 for large lead acid-battery recyclers and lead melting facilities.
- 3-11 Response:** SCAQMD has required similar signage requirements in other rules such as Rule 410 for material recovery facilities, Rule 403 for dust, and Rule 461 for gasoline dispensing facilities. Signage requirements were added in Proposed Rule 1430 based on input SCAQMD staff had received at a public meeting where community members commented that they do not know who to call if there is an air quality issue. Subdivision (k) allows the owner or operator to submit a written request for alternatives to signage requirements for the Executive Officer's approval.
- 3-12 Response:** Proposed Rule 1430 incorporates specific exclusions in the applicability and in key definitions. For example the definition of hand grinding excludes grinders with a disc size 1 inch or less, and the definition of metal grinding operation excludes hand grinding that is for quality control or quality assurance to remove small imperfections on metal parts.

Proposed Rule 1430 does not require all sources to have HEPA filtration. Under paragraph (e)(3), if a facility can meet specific criteria such as the number and type of grinding and the toxic screening emissions for permitting, the facility may alternatively fit the final station of any emission control device with a filter media rated by the manufacturer to achieve a minimum of 98% control efficiency.

Regarding cost impacts, please refer to the Draft Socioeconomic Impact Report for Proposed Rule 1430. Cost impacts take into consideration capital equipment, construction of total enclosures, and operation and maintenance costs.

Proposed Rule 1430 includes provisions to ensure installation of pollution controls are not in conflict with OSHA or NFPA requirements.

3-13 Response: Facilities that are currently grinding in the open air with no pollution controls will have higher costs to build a total enclosure and install pollution controls. Implementation of Proposed Rule 1430 will reduce the release of metal particulate, of which some is toxic, from grinding operations. Proposed Rule 1430 is an important rule that is needed to reduce metal particulate emissions from metal grinding and cutting operations at metal forging facilities.

Comment Letter #4
Weber Metals
December 13, 2016



Aluminum and Titanium Forgings

16706 GARFIELD AVENUE, PARAMOUNT, CALIFORNIA 90723-0318
 TELEPHONE: (562) 602-0260 FAX: (562) 602-0468

13 December 2016

Ms. Susan Nakamura
 Acting Assistant Deputy Executive Officer
 South Coast Air Quality Management District
 21865 Copley Drive
 Diamond Bar, CA 91765

Attention: Mr. Dan Garcia

Re: Comments on Proposed Rule 1430, Control of Emissions from Grinding Operations at Metal Forging Facilities

Dear Ms. Nakamura:

Weber Metals, Inc. produces aluminum and titanium forgings for the aerospace, defense and commercial airline industries. Based in Paramount, we supply our customers with quality forged products that consistently meet or exceed all applicable customer and regulatory requirements, industry standards, and contractual specifications. We achieve this objective by continually improving our internal process controls and the effectiveness of our Quality Management System through clear understanding of the individual responsibilities and an ongoing self-assessment.

Weber Metals is committed operating in an environmentally responsible manner and with the development of our 60,000-ton press project we are modernizing key aspects of our facility to meet best available standards. We support the South Coast Air Quality Management District's ("District") development of Proposed Rule 1430, Control of Emissions from Grinding Operations at Metal Forging Facilities (PR1430). Weber Metals would be impacted by this rule, and we support a rule design that provides affected facilities a clear and achievable pathway to compliance since the operations covered by the rule have historically been exempt from District regulation under Rule 219. To that end, we respectfully offer the following comments on the 1st draft version of PR1430 which was released on 30 November 2016.

4-1

1. The rule should not apply to low volume activities with very low emissions. Where such operations can be shown to have trivial emissions, they should be excluded from PR1430.

The stated purpose of this rule is to reduce toxic and particulate matter emissions from dry metal grinding and metal cutting operations at metal forging facilities. But as currently drafted, PR1430 does not differentiate larger volume operations which would reasonably be expected to have meaningful emissions from low volume (or intermittent) operations that are likely insignificant in terms of emissions. Including these low volume operations in the rule could result in excessive compliance costs for new emissions controls and testing requirements for emissions which may be insignificant in health terms.

4-2



16706 GARFIELD AVENUE, PARAMOUNT, CALIFORNIA 90723-0318
TELEPHONE: (562) 602-0260 FAX: (562) 602-0468

Aluminum and Titanium Forgings

We recommend that the District develop a low volume/low use exemption for PR1430, or develop a process in the rule by which facilities can off-ramp by providing a case-by-case, health-based justification for exclusion for certain operations. } 4-2 cont

- 2. PR1430 should prioritize the control of emissions from metal grinding operation. The District should reconsider the emissions potential associated with metal cutting operations before subjecting them to the same standard as metal grinding operations. The requirements of Section (e) should be revised.**

As currently drafted, PR1430 would require all metal cutting operations to be controlled in an equivalent manner to metal grinding operations. Based on our many decades of experience, metal grinding operations should be the primary focus for new (or modified) emissions controls and source tests. Conversely, metal cutting operations have a significantly lower potential for emissions. In particular, band saw cutting generates metal chips but these are of such large dimensions (i.e., greater than 1 mm) that they fall to the ground immediately and are swept up or collected in a chip collection system. } 4-3

We recommend the following changes to PR1430 Section (d) and (e):

- (d) Total Enclosures
 - (1) An owner or operator of a metal forging facility is prohibited from conducting any metal grinding ~~and metal-cutting~~ operations outside of a temporary enclosure, enclosure, or total enclosure.
 - (e) Metal Grinding Emission Requirements
 - (1) No later than [one year from Date of Rule Adoption], the owner or operator of a metal forging facility shall vent emissions from all metal grinding ~~and metal-cutting~~ operations to an emission control device that does not exceed a PM outlet concentration of 0.01 grains of particulate matter per dry standard cubic foot as determined by the most recent District-approved source test conducted on behalf of the facility or the District pursuant to subdivision (h).
 - ...
 - (3) The owner or operator of a metal forging facility may alternatively fit the final stage of any emission control device required under paragraph (e)(1) with filter media rated by the manufacturer to achieve a minimum of 98% control efficiency for 0.3 micron particles if the owner or operator:
 - (A) does not conduct billet grinding; ~~or swing grinding; torch-cutting; or metal-cutting;~~
- } 4-3 cont

- 3. The one-size-fits-all proposed standards for metal cutting operations are not practically achievable. We recommend revisions of the definition of metal cutting in Section (c)(15).**

As noted, band saw cutting generates metal chips but these are of such large dimensions (i.e., greater than 1 mm) that they fall to the ground immediately and are swept up or collect in a chip collection } 4-4



16706 GARFIELD AVENUE, PARAMOUNT, CALIFORNIA 90723-0318
TELEPHONE: (562) 602-0260 FAX: (562) 602-0468

Aluminum and Titanium Forgings

system. And some metal cutting conducted at forging facilities involves extremely hot ingots. This is typically done near a press, in the middle of the forging process. Such “hot” cutting cannot be safely performed within a total enclosure and also cannot be safely vented to a baghouse. For these reasons, we recommend revisions of the “Metal Cutting” definition to: (a) differentiate abrasive cutting from band saw cutting since metal cutting with a band saw does not generate smoke or particulates; and (b) to exclude hot cutting from the definition. We recommend the following changes to PR1430 Section (c)(15):

4-4
cont

- (c)(15) METAL CUTTING means for the purposes of this rule a process used to abrasively cut starting ingot or billet stock to length in preparation for the forging process and also to trim forged parts to size without the use of a metal removal fluid. **Vertical band saw cutting and hot cutting are not considered metal cutting for purposes of this rule.**

4. Hand Grinding should be limited to those grinders involving discs greater than 3” in diameter. We recommend revisions of the definition of metal cutting in Section (c)(15)

Discs greater than 1” are used by autobody shops, weld shops, construction, homeowners, and many others not included in this regulation. We recommend that Section (c)(19) be revised as follows:

4-5

- (11) HAND GRINDING means metal grinding using a hand tool, including hand powered tools, that prepares, cuts, grinds and polishes or finishes forgings with a disc greater than **3-inch 1-inch** diameter. Examples include angle grinders, internal diameter “I.D.” grinders, disc grinders, and side grinders.

5. Section (d)(1) should be revised to exclude maintenance repairs requiring less than 3 days to accomplish.

It is impractical to set up a total enclosure for every instance of repair that exists on a piece of equipment that is not movable. Partial collection is possible but some equipment is too large to put a roof over. We recommend the following change to Section (d)(1):

4-6

- (d) Total Enclosures
- (1) An owner or operator of a metal forging facility is prohibited from conducting any metal grinding **and metal-cutting** operations outside of a temporary enclosure, enclosure, or total enclosure. **This requirement shall not apply to maintenance repairs requiring less than 3 days to accomplish.**

6. Section (e)(2) should be revised to limit the HEPA filter requirement to metals which are compatible with that technology. We recommend that Section (e)(2) be revised to limit the use of HEPA technology to those operations where such technology is permitted under applicable OSHA and NFPA standards.

4-7

As noted at a recent California Metals Coalition meeting, HEPA is generally not compatible for control of titanium, magnesium, or aluminum fines. The applicable NFPA standards will not allow dry powder to



16706 GARFIELD AVENUE, PARAMOUNT, CALIFORNIA 90723-0318
TELEPHONE: (562) 602-0260 FAX: (562) 602-0468

Aluminum and Titanium Forgings

be collected due to the chance for spontaneous combustion when very small particles are exposed to water or other oxidizers. Without NFPA approval, the metal forger cannot get insurance for the equipment and without NFPA approval, the city will not issue a building permit. We recommend that Section (e)(2) be revised to limit the use of HEPA technology to those operations where such technology is permissible under both OSHA and NFPA standards.

4-7
cont

7. Source testing requirements should be differentiated to focus testing on source operations with higher emissions, and focus testing on pollutants of concern.

As currently drafted, the source testing requirements in PR1430 would apply the same requirements to all affected source operations. This would be regardless of whether the source has any considerable controlled emissions, and would require testing the same array of pollutants even if certain pollutants were known not to be present at the source. As an example, the rule would require ongoing hexavalent chromium testing even where the compound is known not to be present. This one-size-fits-all approach could cause a significant degree of unnecessary source testing. And it would also create considerable compliance expense to metal forging facilities without environmental purpose.

4-8

Weber recommends that Section (h) be revised to focus source testing requirements on those sources with considerable levels of controlled emissions. Additionally, we recommend that Section (h)(2) be revised such that protocols can be approved on a case-by-case basis to exclude pollutants not reasonably suspected at the source.

8. We support implementing PR1430 as quickly as possible. However, we are deeply concerned that certain timetables in the current draft of PR1430 are simply not achievable. We request that District Staff work with the affected industry to develop achievable deadlines for compliance with PR1430's various requirements.

There are a number of sections of PR1430 which would require compliance within either six months or twelve months. These include standards which would potentially require the engineering, design and construction of new structures and/or emissions control equipment. Since PR1430 was only released in draft form on 30 November and is not final, affected facilities have a limited understanding of what will ultimately be needed for the new or modified operations. And while such grinding operations and associated emissions controls have historically been exempt from District permit pursuant Rule 219, we understand that construction and installation of such equipment would now require a District Permit to Construct once PR1430 is adopted. The District's permitting process often takes 6-9 months by itself.

4-9



16706 GARFIELD AVENUE, PARAMOUNT, CALIFORNIA 90723-0318
TELEPHONE: (562) 602-0260 FAX: (562) 602-0468

Aluminum and Titanium Forgings

For these reasons, we are very concerned that the timetables proposed in Section (d)(3), Section (d)(4), Section (d)(8), and Section (e)(1) may simply be unachievable given the need for permits and the potential need for construction/installation. Generally speaking, we believe it would be reasonable to require compliance "six (6) months after Permit to Construct issuance" for those requirements involving new or modified enclosures and/or control equipment. We request that District Staff work with the affected industry to develop achievable deadlines for compliance with PR1430's various requirements.

4-9
cont

Weber Metals appreciates the opportunity to submit these comments. Should you have any questions or wish to discuss further, please do not hesitate to contact me at (562) 602-0260 ext. 259

Sincerely,

Doug McIntyre
Vice President, Plant Engineering

Cc: Rick Creed, Weber Metals
William Cacheris, Weber Metals
Queen Uchekwe, Weber Metals
Scott Weaver, ERM

- 4-1 Response:** Thank you for your comment. The SCAQMD appreciates your comments and staff is working to provide a proposed rule that will provide a clear and achievable pathway to compliance. The SCAQMD appreciates that Weber Metals has allowed staff to visit your facility on multiple occasions to observe Weber Metals' grinding, cutting, and forging operations.
- 4-2 Response:** Although Proposed Rule 1430 does not include a low volume/low use exemption, there are provisions in the proposed rule that are designed to address specific grinding operations that would be low volume/low use. The proposed rule includes in the definition of "hand grinding" excludes grinders that have a disc less than or equal to 1-inch in diameter and there are special provisions for grinding pieces that have a surface area less than 25 square inches.
- 4-3 Response:** Staff modified the definition of "metal cutting" in Proposed Rule 1430 to include "a process used to *abrasively* cut starting ingot, log, or billet stock..." By including the word abrasively, band saw cutting would not be subject to the provision for other cutting operations where fugitive metal dust is created from the abrasive nature of the cutting operation.
- 4-4 Response:** Please see response to comment #4-3. The addition to comment #4-3 to include only abrasively cutting operations is intended to exclude vertical band saw cutting and hot cutting operations. Staff visited Weber Metals on

December 22, 2016, to observe the band saw cutting and hot cutting operations, and agrees that these operations primarily generate large metal chips and shavings, where the focus of this proposed rulemaking is on metal particulate that can become airborne.

- 4-5 Response:** The proposed rule applies to metal grinding operations and metal forging facilities. Auto body shops, weld shops, construction, and home owners are not affected by the proposed rulemaking. Proposed Rule 1430 does include a provision that has special provisions for metal forging facilities that are grinding pieces that have a surface area less than 25 square inches. In addition, PAR 1430(b) excludes grinding activities conducted to maintain or repair equipment at the facility.
- 4-6 Response:** The applicability section excludes grinding activities conducted to maintain or repair equipment at the facility. Proposed Rule 1430 requires that metal grinding, metal cutting, and small metal hand grinding operations be conducted within a total enclosure. The definition of metal cutting was modified to include abrasively cutting operations.
- 4-7 Response:** In regards to the requirement to install a final stage of the emission control device with HEPA filters, Proposed Rule 1430 states under paragraph (e)(2) that the system should be designed “in a manner that does not conflict with requirements or guidelines set forth by the OSHA or CAL-OSHA regarding worker safety, or the National Fire Protection Association regarding safety.” There are a variety of options that a facility can comply with Proposed Rule 1430 without being inconsistent with NFPA guidelines such as use of spark arrestors or installation of the baghouse outside of the total enclosure, which is the typical practice based on staff’s observations.
- 4-8 Response:** Proposed Rule 1430 includes a provision that allows a facility to forego the hexavalent chromium source test if they can demonstrate that the total chromium level is less than 1 percent in the baghouse catch. The facility would be required to test the baghouse catch at each change out.
- 4-9 Response:** The compliance time under Proposed Rule 1430 for installation of pollution controls for grinding operations and pollution controls for total enclosures with negative air have been revised to 6 months after a Permit to Construct is issued.

Comment Letter #5
California Metals Coalition
December 19, 2016



CALIFORNIA METALS COALITION

Main Office and Mailing Address: 2971 Warren Lane El Dorado Hills, CA 95762
Lobbying Office: 1215 K Street, 17th Floor, Sacramento, CA 95814
Phone: 916-933-3075 Fax: 916-933-3072
Web Site: www.metalscoalition.com Email: staff@metalscoalition.com

To: Ms. Susan Nakamura
Sent via email: snakamura@aqmd.gov
Mr. Eugene Kang
Sent via email: ekang@aqmd.gov
Mr. Daniel Garcia
Sent via email: dgarcia@aqmd.gov

CC: SCAQMD Board of Governors
Wayne Nastri, Executive Officer

December 19, 2016

RE: Comments on Proposed Rule 1430: Metal Grinding at Forging Operations

The California Metals Coalition (CMC) appreciates the opportunity to submit written comments regarding the South Coast Air Quality Management District's (SCAQMD) Proposed Rule 1430: *Control of Emissions from Metal Grinding Operations at Metal Forging Facilities*. CMC has been engaged in the pre-rulemaking process since 2013, as well as the formal rulemaking process initiated with the first working group meeting on October 7, 2015. The comments in this letter are in response to the second draft rule language, which was released **Friday, December 16, 2016**.

5-1

First and foremost, CMC has stated at the SCAQMD public working group meetings, and reiterates in this letter, that we support the rulemaking for Proposed Rule 1430.

Secondly, CMC has stated at the October 26, 2016 public workshop in Diamond Bar and December 1, 2016 public workshop in Paramount that process grinding operations conducted outdoors are not an acceptable practice for the metalworking industry.

CMC is a statewide organization with approximately 250 members. The majority of CMC members meet the definition of a small business. CMC holds quarterly roundtables, most recently on December 9th in Paramount, to guide all members on best management practices, housekeeping, and emission control technologies available to the industry. Gathering as an

industry allows us to learn from one another. It is especially helpful for us to meet at larger metalworking facilities in centralized areas. Companies that take the time to attend a 3-hour CMC quarterly roundtable know that we are advocating for them to learn, network, and stay ahead of the compliance curve.

Finally, SCAQMD staff is quickly moving to bring Proposed Rule 1430 in front of the Governing Board at the earliest available date, March 3, 2017. CMC submits its written comments with the expectation that staff will review and address comments without delaying the rulemaking. This is an aggressive timeline and goal, but CMC is committed to being part of the solution.

5-1
cont

Comment #1: Clear Communication on Hexavalent Chromium and Metal Grinding

The following comment reflects CMC's verbal comments from the working group meetings on September 14, 2016 and October 26, 2016.

CMC shares the public's concern on the elevated levels of hexavalent chromium detected in the city of Paramount. Metal forging employees work daily in industrialized areas of Southern California, and employee families commonly reside in the area. More importantly, the residents, students and businesses that call Paramount home have a right to clean air.

It is equally important to maintain clear communication on the sources of hexavalent chromium at metalworking facilities, how hexavalent chromium is generated at metalworking facilities, and what air district rules will reduce the dangerous levels.

Based on the nature of metal grinding and expanded air monitoring data disclosed by the SCAQMD, it is our understanding that the dangerous levels of hexavalent chromium in Paramount will not be reduced by focusing on grinding operations at metal forging facilities.

5-2

For hexavalent chromium to be generated by metal grinding, one must first understand how hexavalent chromium is created. To begin, the first indicator is the presence of chromium in its elemental form. Chromium can be added to molten ferrous alloys to meet certain metallurgical requirements. A common example is stainless steel, which is generally 80% iron, 15% chromium and 5% nickel.

The presence alone of chromium in the microstructure of the metal does not mean hexavalent chromium has been created. Hexavalent chromium is generated when the metal is heated to a degree very near or at its melting point, which is around 1450 degrees centigrade. To demonstrate the heat threshold to convert chromium into hexavalent chromium, one can look at stainless steel metal cookware. Stainless steel metal cookware is sold and used in millions of

households, but the temperature of cooking does not convert chromium into hexavalent chromium.

The second indicator is whether enough heat is generated during grinding on metals containing chromium to generate hexavalent chromium. Grinding operations are predominantly finishing operations done once the product has solidified. An operator will use a hand grinder or table grinder to finish the smaller metal parts. If the part is larger, a swing grinder will be used.

Since proper grinding is done at temperatures below melting point, it is unlikely that a metal forging facility will convert chromium to hexavalent chromium at the point of grinding. The heated friction between the grinding wheel and metal product can get hot, but is not the temperature levels seen at melting point.

This scientific examination of hexavalent chromium follows SCAQMD's chronological data gathering and discoveries. SCAQMD's November 4, 2016 report titled *Expanded Monitoring of Hexavalent Chromium in Paramount—Assessment of Initial Data*¹ states on page 1 that "additional investigation was needed to determine the source of the hexavalent chromium." The report goes on to chronicle the expansion of air monitoring "to narrow and identify the specific source or sources of hexavalent chromium in the area." It concludes on page 4 by stating "the purpose of the expanded monitoring was to locate the sources of hexavalent chromium."

5-2
cont

Staff should address the following science-based comments on hexavalent chromium and grinding:

- A. Chromium must be present in the alloy to potentially generate hexavalent chromium. But proposed Rule 1430's definition of "(13) Metal" lists examples such as "metals include, but are not limited to, iron, steel, and their iron-based alloys, stainless steel, aluminum, copper, brass, bronze, gold, silver, zinc, tin, lead, platinum, nickel, chromium, cadmium, manganese, tungsten, and titanium and their non-ferrous alloys". Proposed Rule 1430 must be clear on what alloy(s) can potentially be converted to hexavalent chromium.
- B. Chromium is converted to hexavalent chromium at processes with a certain temperature threshold, more specifically at the melting point of the alloy. Proposed Rule 1430's definitions of "(2) Billet Grinding," "(10) Hand Grinding", "(14) Metal Cutting", "(22) Small Hand Grinding," "(23) Stand Grinding", and "(24) Swing Grinding" will not meet this temperature threshold, but are included in the rule as sources of hexavalent chromium emissions. Scientific justification is expected in Proposed Rule 1430 for how grinding and cutting generates hexavalent chromium.

¹ <http://www.aqmd.gov/docs/default-source/compliance/Carlton-Forge-Works/final-paramount-ass-initial-monitoring-data-10416.pdf?sfvrsn=4>

- C. Proposed Rule 1430 has been promoted as a toxics rule, and is placed in the “1400” category of SCAQMD rules. On October 26, 2016, staff focused much of the working group meeting on hexavalent chromium and discussed the use of CARB test method 425. It would be helpful to all stakeholders to release SCAQMD’s lab reports, not just the results, from the air monitors. The lab reports are arguably more important than the data summaries. This is important communication because Proposed Rule 1430 states it will reduce “toxic” emissions, ex: hexavalent chromium.
- D. SCAQMD requires in Proposed Rule 1430 that point source testing be conducted under “(h) Source Tests”. But CMC is unaware of SCAQMD conducting its own point source tests to support the conclusion that hexavalent chromium is generated at grinding operations. It would be expected that SCAQMD has conducted point source testing on hand grinding, stand grinding, swing grinding, and billet grinding during the multi-year rulemaking process. This is additionally important because fugitive emissions do not occur without source emissions. Bag house dust, glass plates on roof tops, and neighborhood air monitors offer cumulative data results from multiple processes or multiple neighboring sources. SCAQMD should state whether or not it has conducted point source testing at metal forging process grinding operations. And if this data has been collected, the lab data—especially for hexavalent chromium—should be shared with the public.

5-2
cont

Comment #2: Hexavalent Chromium Source Testing Requirement at Metal Forging Facilities that Do Not Generate Hexavalent Chromium

The following comment reflects CMC’s verbal comments from the working group meeting on October 26, 2016.

Proposed Rule 1430, section “(h)(1)(B) Source Tests” is required every 48 months for hexavalent chromium and multiple metal emissions. It is unclear why all grinding operations would be pre-determined to generate hexavalent chromium. Based on “Comment #1”, a scientific explanation for the assumed creation of hexavalent chromium at all grinding operations has not been established by the SCAQMD staff. CMC suggests that unless the SCAQMD can determine that hexavalent chromium is reasonably present at all point source grinding operations, this subsection should be amended.

5-3

Comment #3: Defining Volume Metrics for a Metal Forging Rule

The following comment reflects CMC’s verbal comments from the working group meetings on September 14, 2016, October 26, 2016, and December 1, 2016.

5-4

At the last three public workshops, the SCAQMD staff noted that the 22 metal forging facilities visited demonstrated unique quantities of metal grinding particulate matter being generated. Volume of metal grinding was how staff distinguished a new rule for metal forging facilities.

Examples provided by staff included: the significant amount of particulate matter created during billet grinding, the size or surface area of the metal products being grinded at metal forging shops, and the intensity of grinding being conducted at a metal forging shop. Based on staff's presentation of this information, volume calculations were expected to be included in Proposed Rule 1430 to support these conclusions.

As an example, "(2) Billet Grinding" removes inches of metal from large metal billets that can measure 32 square inches and 10 feet long. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

As a second example, "(24) Swing Grinding" is used on larger metal products. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

As a third example, "(23) Stand Grinding" is for small parts that can be easily handled by an individual worker. Grinding occurs at a standing grinding table and the activity typically includes taking off the rough edges (approximately 1/8 inch) from the part. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

5-4
cont

As a fourth example, "(10) Hand Grinding" is for smaller surface areas or polishing. The hand grinder is portable, and conducted on a part much smaller than swing grinders. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

Finally, as a fifth example, "(22) Small Hand Grinding" is similar to hand grinding, but acknowledges the need to define total surface area. A volume calculation can be established to estimate the volume of particulate matter being created. Intensity, time/duration, and particle size are also factors within the calculation.

Overall, Proposed Rule 1430 seeks to regulate several different types of grinders that perform very different functions, and create vastly different volumes of particulate matter. Relying on Proposed Rule 1430's single solution approach for all grinding operations does not match the unique SCAQMD staff field reports conveyed at working group meetings. CMC expects that the SCAQMD will create a volume metric and match the volumes of particulate matter to the various proposed solutions within Proposed Rule 1430.

5

Comment #4: Sensitive Receptors, Zoning, and SCAQMD Advocating for Public Health

Proposed Rule 1430, section “(d)(8) Total Enclosure with Negative Air” uses a 300-foot sensitive receptor measurement, or 1,000-foot school measurement, to require a total enclosure with negative air. This type of measurement is used by several air agencies in California, including the California Air Resources Board (CARB), to keep new schools, residences, hospitals, or prisons away from facilities with toxic metals, such as hexavalent chromium.

CMC is not suggesting changing this requirement in Proposed Rule 1430, but must express its significant and ongoing frustration with zoning decisions that continue to be made by select cities throughout the South Basin.

Nearly all CMC members have occupied industrial areas of the South Basin long before the construction of parks, schools, residences, hospitals, or businesses with sensitive receptors. CMC has countless situations where metal facilities acquire a new neighbor, and the new neighbor is a sensitive receptor.

As an example, one of our light industrial metal working members recently made a \$10 million equipment investment in his company only to have a swimming school, day care, and restaurant approved by the city and built within 300 feet.

CMC asks the SCAQMD to become a stronger advocate for public health by getting directly involved in city planning decisions. The current approach is not effective, especially if the SCAQMD is relying on advisories. This advocacy will require the use of SCAQMD’s many lobbyists in Sacramento to create the necessary change for our future.

5-5

Comment #5: Proposed Rule 1430’s Trigger of City Building Permits, CEQA, etc.

The following comment reflects CMC’s verbal comments from the working group meeting on October 26, 2016.

Many of the structures at metal forging facilities are not immediately conducive to total enclosures, bag houses, secondary filters, and especially negative air. Changes will need to be made to the building to allow the requirements within Proposed Rule 1430 to be met. It is expected that these changes will trigger building permit requirements from the city, CEQA review, fire departments, and even SCAQMD’s own permitting process. Here are some examples:

5-6

- ☐ “(d) Total Enclosure”
- ☐ “(d)(8) Total Enclosures with Negative Air”
- ☐ “(e)(1) Metal Grinding Emission Requirements” emission control device

- “(e)(2) & (3)” HEPA filters or an equivalent secondary control device

Under Proposed Rule 1430, each of the bulleted items above has completion requirements of “no later than [6 months after Date of Rule Adoption]” or “no later than [12 months after Date of Rule Adoption].”

This requirement will be a challenge and likely result in a violation of the rule if the SCAQMD does not take into account the time it takes to receive a permit from the city, conduct a CEQA review, pass fire department or other local agency reviews, and complete the SCAQMD permitting process. The 6-month and 12-month deadlines cannot be met without considering the aforementioned permitting and review requirements.

CMC suggests amending Proposed Rule 1430’s language to acknowledge the legal steps required before starting to build a total enclosure, total enclosure with negative air, bag house, emission control device, or HEPA filter.

5-6
cont

Comment #6: December 9th Metal Grinding Public Advisory Notice

While Proposed Rule 1430’s language does not include the December 9th Public Advisory Notice on outdoor metal grinding, the content of the notice is directly related to this proposed rule. As a result, CMC has included comments in this letter.

The South Coast Air Quality Management District (SCAQMD) released a public notice dated Friday, December 9th, that advised “all grinding operations” to be conducted indoors. As stated in the opening of this comment letter, CMC agrees with—and has proactively promoted to its members—that process grinding operations should not be conducted outdoors.

But the public advisory does not make any distinction between process grinding operations and repair or maintenance. This is confusing to the industry, and likely confusing to the public, especially when the advisory states “emissions may increase health risks for receptors.”

5-7

Repair or maintenance grinding is conducted to keep emission control systems properly operating, to keep containers properly functioning, to fix structures, to avoid accidents, to protect workers, or to simply keep operations running safely. The same grinding equipment (most commonly hand grinders) that is used for process grinding operations may be used for repair or maintenance. The distinction is the duration of the activity, volume of particulate being produced, item being grinded, and purpose of the grinding. The SCAQMD needs to properly advise this in future notices.

Finally, SCAQMD should advise all the operations that conduct metal grinding (See Comment #10) since it is not limited to metalworking facilities.

7

Comment #7: Avoiding Unintended Consequences of (k) Signage

The following comment reflects CMC's verbal comments from the working group meeting on December 1, 2016.

Proposed Rule 1430 requires all metal forging facilities to install a 16 square foot sign that says "TO REPORT ODORS FROM THIS FACILITY, CALL EITHER [FACILITY CONTACT PHONE NUMBER] OR THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG"

If SCAQMD's intent is to educate the public on the SCAQMD phone number and inspection resources, then direct mailing (especially in impacted industrialized areas) of a SCAQMD brochure is the best way for an individual to receive this information. A second option is to include an informational ad in the local newspaper. A third option is to hold more town hall meetings. But placing a sign on 22 metal forgers—which are a small fraction of the 27,000 permitted facilities that are also potential sources of odors across the four counties of Los Angeles, Orange, San Bernardino and Riverside—it is doubtful how this will achieve the goal of educating the public about the SCAQMD resources.

If SCAQMD's intent is to have the community member be able to quickly contact the metal forging facility, then the verbiage of the sign should be changed. The sign should say "TO CONTACT [NAME OF FACILITY] ABOUT ANY CONCERNS, PLEASE CALL [FACILITY CONTACT PHONE NUMBER]."

5-8

If SCAQMD's intent is to pre-determine that all metal forging facilities inherently have nuisance odors, or that odors in a neighborhood should first be directed to a metal forging facility, CMC has to question SCAQMD's goal for singling-out 22 metal forgers in this new rule.

CMC's primary concern isn't in regards to how SCAQMD handles confirmed odor nuisances, but rather how SCAQMD records an unconfirmed complaint. An unconfirmed complaint means that either the odor/air contaminant release could not be detected, or the source/facility cannot be determined.

Although the source of the odor could not be detected, the SCAQMD records the name of a company. This recording system places a negative mark on the business. It is not uncommon for the SCAQMD system to accumulate 10, 50, 100 or even 200 unconfirmed odor complaints. The media, elected officials, lawmakers, or public see this log of unconfirmed complaints and conclude that action must be taken. Unconfirmed odor complaints are damaging to an individual business.

One simple solution is to change how SCAQMD logs unconfirmed odors. Unconfirmed odors should be recorded by the nearest cross-streets. An example would be to record, "an unconfirmed

8

odor was alleged at the cross streets of Paramount Blvd and Alondra Blvd". Until the issue of unconfirmed odors is rectified by the SCAQMD, unintended consequences are likely to occur.

Section "(k) Signage" should be amended or omitted based on SCAQMD's response to the aforementioned concerns.

5-8
cont

Comment #8: (j)(1) Recordkeeping

Section (A) requiring "monthly records indicating the weight of metal processed by the facility" should be removed or made confidential. California metal forging companies compete around the world. Publicly disclosing the amount of metal processed by the facility is a competitive disadvantage. In addition, sellers of metal to the metal forging facility can use this information to potentially determine the demand side of an economic transaction. Overall, it is unclear how publicly reporting the weight of the metal processed will further the goals of Proposed Rule 1430.

Section (F) requires a "log of reports...regarding odors or other air quality related issues." This requirement may also have unintended consequences. When a metal forging facility works with a neighbor to resolve a potential odor or air quality issue, this should be encouraged by the SCAQMD—not reported under a rule requirement. In certain situations, this report log could be misconstrued to make false determinations about compliance or health risks.

5-9

Along the lines of Comment #7, the industry is becoming more and more sensitized about how unconfirmed odor complaints are being recorded by the SCAQMD. Section (F) just creates a different layer of scrutiny similar to unconfirmed odor complaints and should be amended or omitted.

Comment #9: Benefits of Good Housekeeping; Compressed Air; Dry Sweeping:

The following comment reflects CMC's verbal comments from the working group meeting on October 26, 2016.

Proposed Rule 1430, section "(f) Housekeeping Requirements" will be the most effective part of this rule. Particulates from metal grinding and metal cutting are predominantly heavier particles that fall to the ground. If they are not cleaned up, contained, and/or stored, then the potential to track particulate matter out of the facility will increase. The SCAQMD should emphasize housekeeping as one of the key benefits of Proposed Rule 1430.

5-10

Subsection "(f)(3)(C) Housekeeping Requirements" states that "compressed air cleaning operations or dry sweeping shall not be conducted within 30 feet of any metal cutting or metal grinding operation."

Compressed air does not clean. Compressed air is used so that the grinding operator can see if he or she has successfully smoothed the part. CMC suggest that the SCAQMD revisits this subsection and get some more information from the metal forging community on how compressed air is used at grinding stations.

Eliminating specific dry sweeping will work directly against good housekeeping measures at a metal forging facility. Based on the configuration of the grinding space, there could be spatial limitations if dry sweeping is not an option. CMC suggests eliminating the new dry sweeping requirement within 30 feet of any metal cutting or metal grinding operation.

5-10
cont

Comment #10: Grinding Regulation Will Set a Precedent for 20,000+ Facilities

SCAQMD has proposed to regulate all metal grinding. Examples of operations that conduct some form of metal grinding across the 10,750 square miles of Los Angeles County, Orange County, San Bernardino County, and Riverside County are:

- ☐ Ports
- ☐ Ship yards
- ☐ Rail yards
- ☐ Auto repair shops
- ☐ Water utilities
- ☐ Electric utilities
- ☐ Waste management facilities
- ☐ Concrete facilities
- ☐ Refineries
- ☐ Residential construction
- ☐ Office construction
- ☐ Road construction
- ☐ General construction
- ☐ Clean energy projects
- ☐ Truck repair stations
- ☐ Prisons
- ☐ Airports
- ☐ Naval yards
- ☐ Jewelry making and repair
- ☐ Artwork

5-11

Proposed Rule 1430 will set a precedent for 20,000+ facilities because:

1. SCAQMD staff states grinding is an unregulated activity that it will now regulate.
2. SCAQMD staff concludes that all grinding is a source of toxic or particulate emissions.

10

3. SCAQMD staff concludes that all types of grinders larger than 1" are a source of toxic or particulate emissions.
4. SCAQMD staff concludes that all metals (even gold and platinum) are a source of toxic or particulate emissions.
5. SCAQMD staff concludes no distinction for the duration of grinding.
6. SCAQMD staff concludes no distinction for the intensity of grinding.
7. SCAQMD staff concludes no distinction for the volume of grinding particulate created.
8. SCAQMD staff concludes no distinction for the number of grinders used at a facility.

To provide an example of how this proposed rule will set a precedent, hand grinding conducted at a metal forging facility is the same as hand grinding done at a construction site, auto repair shop, port, airport, water utility line installation, etc. Under Proposed Rule 1430, SCAQMD's precedent is for all grinding, from all sources, based on any duration, intensity, volume, or metal to: (1) All metal grinding operations must be under a total enclosure. (2) All metal grinding must be vented to an emission control system.

5-11
cont

The purpose of this comment is to emphasize the need for SCAQMD staff to provide more detailed rule language, and define why Proposed Rule 1430 is specific to metal grinding conducted at metal forging operations.

Comment #11: Conclusion

For the last 48 months, SCAQMD examined metal grinding as a potential source of hexavalent chromium generation. 45 of these 48 months (January 2013 to September 2016) concentrated on 22 metal forging facilities throughout the South Basin, with much focus on a single facility in Paramount.

The last 3 months (October 2016 to December 2016) have been significant for the SCAQMD. Expanded air monitoring efforts uncovered locations and processes prone to generating the dangerous levels of hexavalent chromium in the city of Paramount.

On November 30, 2016, the city of Paramount released a list of 88 metalworking businesses that are known in the industrial area. On December 12, 2016, SCAQMD shared that a multi-agency efforts has visited 170 facilities in the last 6 weeks. CMC expects there will be more businesses to be discovered, especially when the SCAQMD focuses on rogue operations.

Based on the expanded number of businesses currently being uncovered, new data collected by the SCAQMD, recent enforcement activities, and science of metal grinding, CMC concludes that Proposed Rule 1430 will provide the following:

- a) Bringing Process Grinding Operations Indoors.

5-12

11

- b) Permitting of Grinding Equipment.
- c) Possible Reduction of Nuisance Dust and Particulates.
- d) Potential Reduction of Odor Complaints.
- e) Better Housekeeping.

} 5-12
cont

On behalf of the California Metals Coalition, thank you for the opportunity to participate in the rulemaking process for Proposed Rule 1430: *Control of Emissions from Metal Grinding Operations at Metal Forging Facilities*. If you require any additional information, please do not hesitate to contact us directly.

CMC looks forward to the next working group meeting, receiving feedback on its enclosed comments, and finding quick, science-based solutions for communities in the South Basin.

Sincerely,



James Simonelli
Executive Director

5-1 Response: The SCAQMD staff appreciates that the California Metals Coalition supports the rulemaking for Proposed Rule 1430. The SCAQMD also concurs with the California Metals Coalition that process grinding operations conducted outdoors are not an acceptable practice for the metal working industry. Responses to the California Metals Coalition's comments are provided below.

5-2 Response: The proposed rule is not targeting a specific toxic air contaminant, but is addressing metal particulate some of which are toxic air contaminants. In Working Group Meeting #2, staff explained that based on ambient monitoring on Vermont Ave. near Carlton Forge Works, there were two metals of concern, nickel and hexavalent chromium. These metals were identified based on the levels and their toxicity. The SCAQMD staff had explained that the voluntary measures that Carlton Forge Works had implemented to reduce metal particulate emissions from their metal grinding operations showed a reduction in nickel levels, but not hexavalent chromium levels. This was an indication that the hexavalent chromium levels were likely coming from additional source(s) that could possibly come from operations other than metal grinding within the forging facility or possibly from a separate source. SCAQMD staff held a Town Hall Meeting in the city of Paramount on August 16, 2016 committing to conduct expanded monitoring of hexavalent chromium.

In October 2016, the SCAQMD staff initiated additional hexavalent chromium monitoring in the city of Paramount to identify the source(s) of hexavalent chromium. This expanded monitoring effort included three sites near Carlton Forge Works on Illinois and Somerset, Illinois and Adams, and Illinois and Jefferson. As shown in Table A-1 below, of the seven monitored values between October 15 through November 2, 2016, levels near or above 1 ng/m³ at Sites #5 and #6 indicated that additional monitoring is needed to better understand the source(s) of hexavalent chromium. Separate from monitored levels near Carlton Forge Works, monitored levels several blocks south of these monitors revealed much higher levels where SCAQMD resources were needed. However, SCAQMD staff will be conducting additional monitoring near Carlton Forge Works to better understand the source(s) of hexavalent chromium. Future amendment to Proposed Rule 1430 or other actions for facilities unrelated to metal forging may be needed, depending on results of additional monitoring.

Table A-1

Hexavalent Chromium Monitoring Date	Site #4 Illinois/ Somerset	Site #5 Illinois/ Adams	Site #6 Illinois/ Jefferson
Saturday, October 15, 2016	0.28	0.06	1.0
Tuesday, October 18, 2016	0.43	1.2	0.46
Friday, October 21, 2016	0.41	0.68	0.9
Monday, October 24, 2016	0.34	0.59	0.89
Thursday, October 27, 2016	0.21	0.28	0.98
Sunday, October 30, 2016	0.08	0.23	0.29
Wednesday, November 2, 2016	0.2	0.42	0.53
Average	0.28	0.49	0.72

It is appropriate to include Proposed Rule 1430 as a 1400 rule since reduction in metal particulate will reduce those metals that are toxics. Glass plate samples placed at four facilities, Carlton Forge Works, Weber Metals, Press Forge, and Schlosser Forge in 2014 near their grinding operations showed the presence of various metals, some of which are toxic such as arsenic, cadmium, and nickel to name a few shown as shown in Table A-2 below. Pollution controls to reduce metal particulate will concurrently reduce toxic metals.

Table A-2
Glass Plate Sampling at Metal Forging Facilities (2014)

	Location Description	As	Ba	Ca	Cd	Co	Cr	Cu	Fe	K	Mn	Mo	Ni	Pb	Sb	Sn	Sr	Ti	V	Zn
Carlton Forge	Roof of grinding room	6.81	418	18,500	2.12	555	607	665	35,300	6,220	430	217	3,340	89.8	7.98	33.1	181	2,320	134	1,300
	West side of roof of saw bldg	6.98	491	19,300	2.37	761	815	815	35,500	7,260	449	287	4,500	130	9.71	31.9	205	2,390	130	1,330
	East side of roof of saw bldg	7.09	521	18,000	2.43	556	661	624	26,200	6,870	391	279	3,620	94.3	9.53	31.2	215	2,470	118	1,500
	Roof of Residence across street from facility	7.63	547	21,700	1.99	258	358	746	27,100	7,690	438	149	1,750	133	10.3	42.8	185	2,290	96.8	1,270
	Top of fence along perimeter of parking lot	8.29	583	20,700	1.51	146	234	271	28,200	8,810	470	89.8	1,020	99.6	14.3	30.7	207	2,120	82.1	1,140
Weber Metals	Site #1 Roof of Bldg O	16.3	513	34,400	1.66	17.1	98.4	450	28,000	12,000	467	37.3	172	91.2	9.24	20.4	229	2,730	302	1,720
	Site #2 Open area next to tracks	17.4	2,370	35,100	1.39	17.6	160	578	71,500	12,500	637	35.5	215	98.7	6.92	21.8	272	2,720	237	1,630
	Site #4 Top of Transformer at North perimeter of facility	10.5	453	29,500	1.89	18.7	310	731	42,300	7,200	454	163	862	100	10.9	74.3	241	8,710	568	2,110
	Site #5 Roof of Bldg P	9.62	521	28,600	1.53	20.9	224	632	36,100	9,160	606	67.2	508	99.8	8.54	35.1	204	12,500	736	1,790
	Site #6 Top of Patio adjacent to Bldg L	6.98	575	31,100	2.37	13.5	86.8	654	27,700	7,060	398	23.8	151	211	87.5	89.8	184	1,850	75.8	2,080
Press Forge	Site #7 Roof of storage shed at Promise Hospital	18.3	495	14,300	3.14	48.9	1,990	997	161,000	6,690	1,130	995	5,810	89.3	12.1	77.6	167	10,200	683	864
	Site #1 Roof of outside grinding station	6.61	59.3	5,780	4.67	1,340	5,070	722	194,000	1,710	1,190	1,640	18,200	15.3	0.08	6.1	63.3	7,150	774	154
	Site #2 Roof of larger outside grinding station	8.46	38.2	3,080	6.53	791	5,140	786	197,000	1,010	1,230	2,290	18,600	14.7	0.15	7.7	51.5	7,030	919	81.1
	Site #3 Adjacent to Forge Building	12.5	333	17,200	2.4	60.1	1,170	364	116,000	4,980	835	634	4,110	55.2	5.4	85	153	9,770	794	746
	Site #4 Adjacent to 2 nd Forge Building	9.65	481	20,600	2.6	36.2	224	247	39,100	8,570	532	125	757	618	9.3	503	183	2,840	136	1,170
Schlosser	Site #5 North Perimeter of facility	9.73	527	20,300	3.26	31.3	181	437	32,700	7,910	473	55.1	430	414	10.3	18	179	2,510	109	1,150
	Site #6 Adjacent to Eng Building	11.2	344	19,900	2.64	34.1	711	292	79,400	5,650	707	380	2,730	81.3	6.9	62	164	6,220	440	894
	Site #7 Storage shed at Promise Hospital	13.9	430	20,400	3.66	83.2	1,260	468	105,000	7,070	838	769	4,340	70	8.6	112	184	9,510	643	769
	Admin Bldg roof	38.4	591	25,062	3.4	329	574	641	44,791	7,607	1,133	667.8	2040	106.4	12.2	31	189	1,965	85.02	1,884
	Roof of container adjacent to bldg 4	15.3	450	27,871	4.35	1,797	2,785	635	59,792	6,288	1,170	1,505.7	12,434	90.78	5.33	20.2	181	2,716	142.9	1,861
Schlosser	Southeast end of grinding room	20.5	444	25,233	2.65	1,072	774	503	36,556	6,027	1,084	527.36	7,277	107.1	9.97	21.5	213	2,073	99.48	1,751
	Southeast end of grinding room adjacent to emission contr	12.2	248	14,636	4.46	8657	6,983	371	27,754	3,531	546	2,195.6	58,462	48.88	3.81	9.37	148	2,661	149.4	1,035
	On top of modular between bldgs 2 and 3	11.2	243	19,163	3.74	4540	3,742	483	34,852	3,631	599	1,758.1	31,059	46.04	2.3	10	124	1,988	148.3	1,477

5-3 Response: Staff has added a provision in Proposed Rule 1430 that will allow facilities that can demonstrate that if the particulate in the catch of the baghouse is 1 percent total chromium or less, that they would not be required to conduct a source test for hexavalent chromium. This demonstration would be required to be made at each changeout of the baghouse catch.

5-4 Response: Based on site visits to metal forging facilities subject to Proposed Rule 1430, metal grinding is an integral part to the metal forging operation. The SCAQMD staff does not have volume information regarding the amount of particulate that is being created as this is a newly regulated source category. Proposed Rule 1430 under paragraph (j)(1) will require that facilities submit monthly records of the weight of metal waste collected by the baghouse catch.

As you are aware, when the rulemaking began there were four facilities that were conducting grinding in the open air, with no pollution controls. The facilities that were grinding in the open air are using either hand or swing grinders. It is the SCAQMD staff's understanding that establishing requirements that prohibit open grinding and pollution controls are not inconsistent with CMC's comments stating that the "...process of grinding operations conducted outdoors are not an acceptable practice for the metalworking industry."

Proposed Rule 1430 provides variable requirements for small parts grinding and facilities with less than 10 hand or stand grinders. In addition, certain

definitions such as hand grinding excludes hand grinders with discs that are 1-inch or less in diameter.

- 5-5 Response:** The SCAQMD staff does agree that it is unfortunate when siting decisions are made that bring sensitive land uses close to certain industrial sources. The SCAQMD does have a robust Inter Governmental Review (IGR) program to review environmental documents prepared under the California Environmental Quality Act (CEQA). Under the CEQA IGR program, SCAQMD staff reviews CEQA documents from local jurisdictions and provides recommendations on buffer zones and siting distances based on the CARB's Air Quality and Land Use Handbook, where appropriate.
- 5-6 Response:** For requirements where a total enclosure will be constructed or the installation of pollution controls, the compliance date has been changed from 12 months from date of adoption to 6 months from the date the permit to construct is issued. This ensures that the facility is not penalized if there is a delay with issuing the permit to construct. Staff communicated with city building department representatives to ensure that the timeframe was adequate.
- 5-7 Response:** Thank you for your comment. The SCAQMD staff agrees that there is a distinction between process metal grinding and metal grinding for repair and maintenance activities. This distinction is provided in Proposed Rule 1430.
- 5-8 Response:** During the Working Group Meetings and at the Public Workshop and Public Consultation Meetings, there were a number of comments regarding the signage. Community representatives have requested the signs and are requesting that the SCAQMD 1800-CUT-SMOG be the first number. Proposed Rule 1430 does include a new provision that will require facilities to track confirmed odor complaints and after five confirmed odor complaints will require the facility to implement a measure to reduce odors.
- Regarding comments about confirmed odor complaints, the SCAQMD will make a distinction between confirmed and unconfirmed odor complaints when discussing this issue to the public.
- 5-9 Response:** The provision to require monthly records indicating the weight of metal processed by the facility has been removed from Proposed Rule 1430.
- 5-10 Response:** The SCAQMD staff agrees that housekeeping is one of the key benefits of Proposed Rule 1430. Housekeeping is the third level of control, after the point source control, and total enclosure for containment of metal particulate. The SCAQMD staff agrees on the efficacy of housekeeping measures to reduce metal particulate in and around the facility and to

minimize re-entrainment of metal particulate particularly from areas where there is foot and vehicular traffic.

Regarding use of compressed air and dry sweeping, the overall objective of this provision is to minimize the opportunity for fugitive dust to become airborne. Under Proposed Rule 1430, compressed air is allowed if the compressed air cleaning operation or dry sweeping is conducted under an emission control device.

5-11 Response: SCAQMD staff has not proposed to regulate all metal grinding. Staff is looking at several options for regulating metal grinding operations. One is to establish requirements in source specific rules as those rules are adopted and amended. The second approach would be to develop a universal grinding rule that would cover a variety of metal grinding operations. Regardless of the approach, the SCAQMD staff will evaluate the sources and identify the appropriate pollution control approach. Similar to Proposed Rule 1430, the SCAQMD staff will work with a stakeholder working group to get input from the regulated industry, agencies, community and environmental groups. Proposed Rule 1430 sets a precedent for metal grinding and metal cutting operations at metal forging facilities. Many of the statements regarding why Proposed Rule 1430 will set a precedent for 20,000+ facilities is taking specific provisions in Proposed Rule 1430 out of context, which is inaccurate and misleading. For a discussion on the need for proposed rule 1430, please refer to Chapter 2.

5-12 Response: The SCAQMD staff agrees that Proposed Rule 1430 will achieve the items you identified. In addition, Proposed Rule will establish standards for point source controls, total enclosures, and housekeeping procedures. These standards will ensure that equipment and measures are properly implemented, with monitoring to ensure continued compliance. Implementation of Proposed Rule 1430 is needed to ensure that metal particulate, some of which are toxic are well controlled to ensure public health protection for the people that live, work, recreate, and educate near those facilities.

Independent Lubricant Manufacturers Association

400 North Columbus Street, Suite 201
Alexandria, VA 22314
703.684.5574
703.836.8503
www.ilma.org
ilma@ilma.org



December 19, 2016

Via Electronic Mail (SNakamura@aqmd.gov)

Ms. Susan Nakamura
Acting Assistant Deputy Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4182

Re: Proposed Rule 1430 – Control of Emissions from Grinding Operations at Metal Forging Facilities

Dear Ms. Nakamura:

The Independent Lubricant Manufacturers Association (“ILMA” or “Association”) submits the following comments on the South Coast Air Quality Management District’s (“SCAQMD”) pre-rulemaking draft Proposed Rule 1430 - Control of Emissions from Grinding Operations at Metal Forging Facilities. These comments supplement the Association’s December 9, 2016 letter.

Definitions

ILMA requests that SCAQMD augment its current pre-rulemaking draft Proposed Rule to reflect the following two definitions for “flood application” and “Minimum Quantity Lubricant.”

Flood Application (of Metalworking Fluids for Grinding Metal Parts):

Flood application is the application of a metalworking fluid applied at the grinding wheel/work piece interface that meets all or part of the following conditions and is sufficient to suppress dust, reduce heat and spark generation at the point of cut:

1. Applying the metalworking fluid at a velocity of three (3) feet per second or greater;
2. Applying the metalworking fluid at a volume flow rate of one (1) US gallon per minute or greater; and,
3. Applying the metalworking fluid whereas the nozzle application tip pressure is ten (10) pounds per square inch gauge (PSIG) or greater.

6-1

President, **Boh Ann Jones**, Hangsterfer's Laboratories, Inc.

Vice President, **Dave Croghan**, Maxxim Petroleum

Treasurer, **Barbara Kudis**, Allegheny Petroleum Products Company

Secretary, **Chuck Decker**, American Oil & Supply International LLC

Immediate Past President, **Frank H Hamilton III**,
South Atlantic Services, Inc.

Chief Executive Officer, **Holly Alfano**

General Counsel, **Jeffrey L. Lottor**

Ms. Susan Nakamura
December 19, 2016
Page 2 of 2

Minimum Quantity Lubricant:

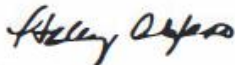
A Minimum Quantity Lubricant (MQL) is a lubricant, not a coolant, and does so in "minimum quantities." MQL coats the tool work piece interface with a thin film of lubricant and minimizes heat buildup through friction reduction. MQL fluids can be applied by pre-coating the tool in the MQL fluid or by direct application at the tool work piece interface with a fine mist. MQL fluids are not well suited for grinding operations since grinding processes generate significant heat at the point of cut. Thus more cooling is required than lubricity. 6-2

These definitions will ensure that forging operations utilize an appropriate volume of metalworking fluids and that those fluids are applied properly.

* * *

ILMA requests that the definitions above be included in the text of Rule 1430 as well as the modification to the applicability section outlined in the Association's December 9, 2016 letter.

Sincerely,



Holly Alfano
CEO

- 6-1 Response:** Given the range of flood applications in the universe of facilities subject to Proposed Rule 1430 the definition of metal removal fluid is intended to be broad and not to exclude applications based on certain flow rates, etc. However, Proposed Rule 1430 has been modified to incorporate types of flood applications by excluding minimum quantity lubrication techniques from the definition of a metal removal fluid. See response #2 below for clarification on the meaning of minimum quantity lubrication.
- 6-2 Response:** Proposed Rule 1430 has been modified to include a description for minimum quantity lubrication in the definition of metal removal fluid. This description captures the definition proposed by the commenter. Specifically, minimum quantity lubrication is described as, "techniques that coat the tool work piece interface with a thin film of lubricant and minimize heat buildup through friction reduction, further, the proposed Minimum quantity lubrication fluids are applied by pre-coating the tool in the lubricant, or by direct application at the tool work piece.

**Comment Letter #7
Valley Forge Incorporated
December 29, 2016**



December 29, 2016

To: SCAQMD Board of Directors

CC: Susan Nakamura (snakamura@aqmd.gov), Dan Garcia (dgarcia@aqmd.gov), Eugene Kang (ekang@aqmd.gov), Wayne Nastri (wnastri@aqmd.gov)

RE: Negative Impact of Forging Rule 1430 on a Small Business

Valley Forge, Inc. is 1 of 22 metal forging facilities that will be impacted by Proposed Rule 1430. SCAQMD visited our shop during the rulemaking process. We are a small, family-owned business with 12 employees. The jobs we provide are good-paying jobs with a middle-class wage. } 7-1

Valley Forge, Inc. is an open frame, flat die forging facility in Azusa, California. It is in an industrial area and the nearest residential neighborhood is over a mile away. The only material that is ground at the facility is titanium. Titanium is a non-toxic metal. Titanium is safe enough to use in cookware, including the surface of cookware. Because of titanium's biocompatibility, it is safely used in the medical community for dental implants, false eye implants, heart pacemakers, spinal fusions, joint replacements, and more. } 7-2

As currently written, Proposed Rule 1430 will put our small company out of business. For Valley Forge, the rule requires any grinding from titanium to be conducted in a total enclosure, with a new baghouse, NFPA combustion control systems, and HEPA filters. This system will cost between \$250,000-\$1,000,000 when including plans, engineering, permits, source testing, equipment, and maintenance. } 7-3

Since titanium is non-toxic, there should be options in Proposed Rule 1430 to allow us to control potential nuisance dust without going out of business. The proposed rule as written has no distinction between toxic and non-toxic metals, size of company, location of company in relation to residential neighborhoods, volume of grinding, or options for particulate controls. } 7-4

Valley Forge wants to continue operating its forging facility in Azusa. We ask that you to look at the science and provide options in the rule that match the concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael K. Holmes'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Michael K Holmes
President, Valley Forge Inc.
444 S. Motor Ave
Azusa, CA 91702

- 7-1 Response:** Based on staff's observations at a site visit at Valley Forge during the rulemaking process, Valley Forge was conducting its swing grinding operation outside of a building enclosure with no air pollution controls. On January 18, 2017, SCAQMD spoke with Mr. Holmes to discuss the requirements under Proposed Rule 1430.
- 7-2 Response:** Proposed Rule 1430 will help to reduce metal particulate, of which some are toxic air contaminants. Based on glass plate samples that were taken at other metal forging facilities that are also working with titanium, the SCAQMD found that there is the presence of metals that are toxic air contaminants such as nickel, arsenic, and cadmium. Through the abrasive nature of grinding operations, metal particulate can become airborne. As discussed in Chapter 1 of this Draft Staff Report, ambient air monitors have shown that these metal particulate emissions from grinding operations, if not well controlled, can become fugitive. Ambient monitors have also shown, that pollution controls such as baghouses with the appropriate ventilation, combined with total enclosures and housekeeping measures can reduce ambient levels of metal particulates from grinding operations.
- 7-3 Response:** On January 18, 2017, SCAQMD staff spoke with Mr. Michael Holmes regarding the specific provisions of Proposed Rule 1430. Staff discussed the pollution controls that would be needed and the requirements for a total enclosure. Staff clarified that based on the current proposal with some revised modifications, only facilities that were within 1,000 feet of a pre-school or a school or 300 feet of a sensitive receptor would be required to have a total enclosure with negative air that is vented to air pollution controls. (Staff's proposal to extend the distance from 300 to 500 feet for sensitive receptors will not affect Valley Forge). Since Valley Forge is located well beyond these distances, their facility would need a total enclosure, but negative air vented to air pollution controls would not be required. Staff discussed that the grinding operation must be vented to pollution controls and generally discussed the housekeeping provisions and the possible need for a HEPA vacuum cleaner. It is staff's understanding that Mr. Holmes felt that he could comply with the provisions of the proposed rule. Based on staff's estimates, the estimated compliance cost would be closer to \$350,000.
- 7-4 Response:** Please refer to Response to Comment #7-2. As discussed in Response to Comment #7-2, glass plate samples have shown that facilities that are working with titanium have shown the presence of metals that are toxic air contaminants. Although titanium may be the primary element, there are a variety of other alloys in various percentages. Glass plate samples as well as ambient monitoring near Carlton Forge Works has shown the presence of other metals (Please refer to Chapter 1 of this Staff Report). Proposed Rule 1430 includes a number of options for facilities. Staff will be adding

a provision that will allow facilities to forgo hexavalent source testing if the baghouse catch at each change out is less than 1 percent. In addition, if the facility is not located near sensitive receptors or schools, negative air vented to pollution controls for the total enclosure will not be required. There are also special provisions for small part grinders and grinding of small parts.

Comment Letter #8
The Boeing Company
January 12, 2017

From: Pearce, William R <william.r.pearce@boeing.com>
Sent: Thursday, January 12, 2017 10:33 PM
To: Daniel Garcia
Subject: Proposed Rule 1430 Comments

Dan, here are general comments and questions with respect to Proposed Rule 1430. I believe the District's intent is to cover forging operations and the following comments follow along those lines. Our basic understanding is that forging is a process that results in metallurgical recrystallization and grain refinement as a result of the thermal cycle (heating metal to plastic deformation temperature) and deformation process. This results in an end product that is uniform in structure and composition. I believe this was what Mike Pearce was alluding to in the meeting. Perhaps a better way to approach the definitions is to have a definition for Metal Forging Operations and a definition for Metal Forging Facility:

- Metal Forging Operation is the process of forming and shaping metals through the use of hammering, pressing, or rolling by heating raw stock, usually in the form of ingots, logs or billets, to its plastic deformation temperature and then shaping to a desired shape and size. } 8-1
- Metal Forging Facility means any facility that performs metal forging operations. Metal grinding, metal cutting, and small hand grinding operations related to metal forging operations are included. }
- With respect to (d)(3), it appears that the District is only allowing the use of total enclosures and precluding the use of other types of equipment that may be as effective in controlling emissions. One specific example are downdraft table booths fitted with HEPA or ULPA filters. However, the units only consist of three walls and a ceiling. Boeing has found these to be very effective when working on small parts. Recommend that the language in (d)(3)(B) allowing alternate methods for compliance if approved by the District also be included in (d)(3)(A). } 8-2
- Confused about the intent of (e)(5). (d)(3) appears to require the use of a total enclosure. If the total enclosure is vented to a control device, not sure the reasoning behind requiring visual markers for activities that are within a total enclosure. } 8-3
- With respect to (h)(1)(B), requirements should be specified as part of the source test protocol and District approval process, rather than specifically listed in this section. The information for targeted pollutants is required in (h)(4)(B), which is easily obtained through the SDSs for the raw materials. Facilities should not be required to test for materials such as hexavalent chromium if no materials containing chromium are being processed. } 8-4
- With respect to (i)(3), appropriate pressure drops should be determined through the permitting process rather than a "one size fits all" approach. Newer filter systems can handle higher pressure drops with no degradation in efficiency due to significant improvements in construction/design of these filters. The language specified in Rule 1155 is appropriate in this case: all permitted PM control devices shall be operated and maintained in accordance with the manufacturer's operation and maintenance manual or other similar written materials supplied by the manufacturer or distributor of a control device to ensure that the control device remains in proper operating condition. } 8-5
- With respect to Rule 219 exemptions, request that the specific exemptions of concern in Rule 219 be identified until such time as Rule 219 is revised to prevent any potential confusion. One such concern is whether the exemption for small abrasive blasting units would be eliminated as a result } 8-6

of the proposed rule. During the working group meeting, the answer appeared to be no, but the definition of metal grinding raises a concern even for this exemption.

} 8-6
cont

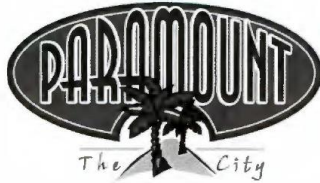
Please let me know if you have any questions.

Bill Pearce
The Boeing Company
310-200-3155

- 8-1 Response:** Proposed Rule 1430 has been modified to include language from the commenter's suggested definition for both a metal forging operation and metal forging facility. Specifically, the proposed rule has been revised to define a metal forging facility to mean any facility that forms and shapes metals through the use of hammering, pressing, or rolling by heating raw stock, usually in the form of ingots, logs or billets, to its plastic deformation temperature and then shaping to a desired shape and size. Metal grinding, metal cutting, and small part grinding operations related to this process are included in this definition.
- 8-2 Response:** Proposed Rule 1430 does not require small part grinding to occur in a total enclosure. Pursuant to paragraph (d)(1) small part grinding may occur in a temporary enclosure, building or total enclosure. The total enclosure requirements set-forth in paragraph (d)(2) of Proposed Rule 1430 (i.e., formerly paragraphs (d)(2) and (d)(3) in the Preliminary Draft Rule) are limited to metal grinding operations, excluding, small part grinding and metal cutting operations.
- 8-3 Response:** During the rule development process the SCAQMD staff conducted site visits at most forging facilities that will be subject to Proposed Rule 1430. During these site visits SCAQMD staff observed several metal grinding operations that conducted grinding activities a significant distance from the emissions collection hood, resulting in poor emissions capture into the emissions control device and significant fugitive emissions. Therefore, paragraph (e)(5) is intended to ensure that hand grinding, stand grinding, swing grinding and torch cutting are conducted close enough to the dedicated emissions collection hood to maximize emissions collection and minimize fugitive emissions.
- 8-4 Response:** Paragraph (h)(1) of Proposed Rule 1430 has been revised to include a provision that will allow for metal analysis by XRF to identify the level of chromium in the baghouse catch(s) of metal grinding or metal cutting operations. The revised provision is intended to provide source test relief to owner(s) or operator(s) of metal grinding or metal cutting operations that processes metals containing very low levels of chromium.

- 8-5 Response:** Paragraph (h)(4) (i.e., formerly paragraph (i)(3) in the Preliminary Draft Rule) of Proposed Rule 1430 has been revised to allow the owner or operator of a metal forging facility an opportunity to demonstrate a different HEPA performance standard for pressure drops. The revised provision requires the owner or operator to demonstrate the performance standard during the performance test for compliance with the emission limitation for the emission control device.
- 8-6 Response:** The SCAQMD staff has revised the definition of a metal grinding operation in paragraph (c)(17) (i.e., formerly paragraph (c)(18) of the Preliminary Draft Rule) of Proposed Rule 1430 to exclude specific types of metal grinding operations, such as, abrasive blasting and shot peening

**Comment Letter #9
City of Paramount
January 19, 2017**



City Council
(562) 220-2223

DARYL HOFMEYER
Mayor

PEGGY LEMONS
Vice Mayor

GENE DANIELS
Councilmember

TOM HANSEN
Councilmember

DIANE J. MARTINEZ
Councilmember

January 19, 2017

From: Office of the Executive Officer	Date: 1/23/17
To: Clerk of the Board	
Cy: Wayne, Phil, Susan	
For your action by:	For your info. <input checked="" type="checkbox"/> handling <input checked="" type="checkbox"/>
For your case for:	signature, cc:

Governing Board Members
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

SUBJECT: SUPPORT OF PROPOSED RULE 1430

Dear Governing Board Members:

This letter is in support of Proposed Rule 1430, which deals with toxic emissions, particulate matter emissions, and odors from grinding and metal cutting operations at metal forging facilities. The City of Paramount strongly urges the South Coast Air Quality Management District Governing Board to adopt Rule 1430 when it is presented in March 2017. The requirements of the proposed rule, which include the total enclosure of metal grinding and cutting operations, venting of emissions to emission control devices, cleaning of areas where grinding and cutting takes place, source testing of emission control devices, and installation of bag leakage detection systems, have proven to significantly reduce emissions. } 9-1

In particular, the requirements of Rule 1430 were successfully implemented by Carlton Forge, located in the City of Paramount, to reduce emissions. Beginning in September 2013, Carlton Forge began implementing measures now contained in Rule 1430. By the spring of 2015, toxic emissions and particulate matter emissions had dropped "significantly" at Carlton Forge, according to the SCAQMD website. Given the clear correlation between the implementation of these measures and the reduction of emissions at Carlton Forge, we believe that adoption of Rule 1430 is essential to protect the health and safety of people living near forging facilities, employees of forging facilities, and, of course, children attending schools near these facilities. } 9-2

While asking that you pass 1430 as quickly as possible, we would also request that SCAQMD complete health assessments and related studies to see if the rule can be even further enhanced eventually in relation to all toxic air contaminants and all emitting facilities. } 9-3

Governing Board Members
January 19, 2016; Page Two

Again, the City of Paramount strongly urges the South Coast Air Quality Management District to adopt proposed Rule 1430 without any possible delay when it is presented.

CITY OF PARAMOUNT

PARAMOUNT CITY COUNCIL



Daryl Hofmeyer
Mayor



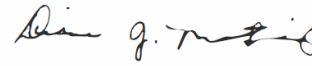
Peggy Lemons
Vice Mayor



Gene Daniels
Councilmember



Tom Hansen
Councilmember



Diane J. Martinez
Councilmember

- 9-1 Response:** The SCAQMD staff appreciates the city of Paramount's support for Proposed Rule 1430. The city of Paramount has been a consistent participant at Working Group Meetings and has very cooperative in providing meeting locations throughout the rule development process so the SCAQMD staff could host Working Group Meetings and the Public Consultation Meeting in the city of Paramount. The SCAQMD staff agrees that implementation of the proposed rule will provide needed emission standards for metal grinding operations at metal forging facilities and will provide greater health protection to residents, students, and workers in the city of Paramount as well as other communities with metal forging facilities with metal grinding operations.
- 9-2 Response:** Many of the voluntary measures that were implemented at Carlton Forge Works to reduce metal particulate emissions from metal grinding operations are incorporated in Proposed Rule 1430. Implementation measures such as point source controls, total enclosures, and increased housekeeping will reduce ambient levels of metal particulate. Monitoring near Carlton Forge Works showed a correlation between nickel levels implementation of measures at Carlton Forge Works where nickel levels declined when measures such as increased air flow, improvements to the total enclosure, and moving grinding activities closer to pollution controls.

- 9-3 Response:** The SCAQMD staff is planning on conducting additional monitoring to better understand if there other emissions sources within the metal forging operation that may be contributing to hexavalent chromium levels. Hexavalent chromium levels are generally below 1 ng/m³, however, levels on individual days have been just above 1 ng/m³. If additional requirements are needed for metal forging operations or another industry category, the SCAQMD will take the appropriate actions to address these emissions.

Comment Letter #10
Almega Environmental
January 25, 2017



January 25, 2017

Mr. Eugene Kang
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765

Subject: Proposed Rule 1430 - Comments

Dear Mr. Kang:

Almega Environmental appreciates the opportunity to submit these written comments regarding the South Coast Air Quality Management District's (SCAQMD) Proposed Rule 1430: *Control of Emissions from Metal Grinding Operations at Metal Forging Facilities*. These comments are made based on the recent Public Workshop presentation on January 19 at the SCAQMD.

Almega Environmental is an SCAQMD LAP certified independent testing company that has provided services in the southland for over 30 years. Most recently have been involved in The SCAQMD Rule 1420.2 rulemaking and testing that was adopted in 2015.

We apologize if some of these comments have been previously addressed, as only recently have become involved in Rule 1430 and may have missed some of the discussion in the past work group meeting. Our comment are as follows:

Comment 1: No Emission Rate Criteria.

The current emission limit are based on concentration (0.01 or 0.002 grains per of particulate matter per dry standard cubic foot). Without an emission rate based on an actual mass basis or corrected for diluent air (as in the NOx corrected to 3% O2 limits) this creates an environment where the limits can be met thru diluting the exhaust air or mixing it with fresh air to bring down the concentrations to the desired level. We do not think that this is one of the desired options that the District would want to inherently be promoting by only have a concentration limit.

10-1



Comment 2: No “di minimis” Criteria for Exempting Low Polluters.

The relative significance of low polluters versus high polluters does not seem to be accounted for sufficiently. An 80,000 scf blower venting a building full of grinding operations would have the

same limit (gr/dscf) as a single grinder being vented in a fume hood with 200 scf blower, although one could be emitting 400 times more emissions. At some point the emission rate of the smaller operation should be considered so low as to be exempt from portions of the rule.

In (e)(3) you do allow for smaller operations to comply by using only a 98% control device instead of the costlier 99.97% HEPA which would be helpful to the smaller facilities.

But we think we may be able to take it one step further. In (e)(3)(C) it is stated that if the uncontrolled emissions are less than the screening levels in Table I of Rule 1401 (New Source Review of Toxic Air Contaminants) that the facility would only need to comply with only the 98% control criteria. We would ask why would any control device be required if they met the standard Rule 1401 screening level criteria. This could be the di minimis criteria for installing a control device.

We believe that the collection/housekeeping management of the emissions is still an important part of the rule, and without these considerations the actual emissions would be difficult to quantify.

The “di minimis” alternative may be to keep the collection/housekeeping aspect of the rule and then just perform a periodic check (every 3 years ??) to make sure the facility is still under the Rule 1401 screening levels (1:1,000,000). If they exceeded these levels, then the next stage, 98% or 99.97% controls, could be required. This would also incentivize the facilities to self-control the emissions to keep below that threshold.

10-2

Comment 3: Maintain No Efficiency Test Requirement

Currently there is no provision in the Rule to test the installed control devices for efficiency. We agree with this direction and do not want to be put into a situation where we need to show a 99.97 efficiency across a HEPA. The inlet loading of the control devices would need to be in excess

of 16000 mg in a Method 5 train to show a 5 mg catch weight with a resultant 99.97% efficiency. This is not practical.

10-3

**Comment 4: Defined Multiple-Metals scope**

Method 436 states

“This method applies to the determination of aluminum (Al), antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), phosphorus (P), selenium (Se), silver (Ag), thallium (Tl), vanadium (Vn) and zinc (Zn) stack emissions from stationary sources.”

10-4

Please confirm that the testing scope will be isolated to just these metals, or will they be subject to possible additions based on the process and materials used.

Also, we request that Mercury be excluded from the standard scope of testing unless Mercury is utilized by the process. Where all the other metals are collected in the same “fraction” of the sampling train, the Mercury aspect of the testing adds an additional absorbing solution and fraction that adds equipment, manpower and a cost burden that should not be incurred if not needed.

10-5

Thanks for your considerations,

A handwritten signature in black ink, appearing to read "Charles M. Figueroa", written in a cursive style.

Charles M. Figueroa
Senior Project Manager
Almega Environmental & Technical Services

Cc: Dan Garcia, SCAQMD
Susan Nakamura, SCAQMD

- 10-1 Response:** The emission standard under Proposed Rule 1430 is based on Rule 1155. The Rule 1155 emission limit of 0.01 gr/dscf was reduced to 0.002 gr/dscf based on the emission limit that was achieved by a baghouse with HEPA for a metal grinding operation.
- 10-2 Response:** SCAQMD staff has performed multiple site visits at metal forging facilities observing multiple types of metal grinding or metal cutting being present. Metal grinding or metal cutting operations done under a continual flood of metal removal fluid were observed to have minimal emissions. As such, these operations are not included in Proposed Rule 1430. Other metal grinding or metal cutting operations can have an additive effect where smaller operations can produce emissions equivalent to larger operations depending on the amount of grinding or cutting stations, duration of operation, or frequency of operation. These observations have made it necessary to include smaller operations to be vented to an air pollution control device. Effective control of emissions via an air pollution control device reduces metal particulates that can become fugitive.
- 10-3 Response:** SCAQMD staff acknowledges the comment. Manufacturers of HEPA systems will certify the product to ensure that the system meets the 99.97% control. Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters allows the operation of applicable equipment without a field certification of emission as long as it has been certified by the manufacturer.
- 10-4 Response:** CARB Method 436 allows the “extra” impinger for Mercury to be removed from the train, if there is no Mercury in the process. PR 1430 requires the submission of a source test protocol. The owner or operator of a metal forging facility may propose to not include the impinger for Mercury in the protocol. SCAQMD staff will evaluate the necessity to test for Mercury on a case by case situation.
- 10-5 Response:** Please refer to response to comment #10-4.

Comment Letter #11**Lisa Lappin****January 19, 2017****(Email addresses are not shown to protect the privacy of email recipients)****Rule 1430_language of odors****From:** Lisa Lappin [ljtutoring@gmail.com]**Sent:** Thursday, January 19, 2017 12:13 AM**To:** Cher Snyder; csnyder@aqmd.gov; Susan Nakamura

Cc: Jane Williams [REDACTED]; Robina [REDACTED]; michele lewis [REDACTED];
 Laurie Guillen [REDACTED]; Ramona Guillen [REDACTED];
 Magdalena [REDACTED]; Ericka Martinez [REDACTED];
 Jo A Arias [REDACTED]; Jose [REDACTED]; Central Thirteen [REDACTED];
 Karina Espinosa [REDACTED]; Rachel Uranga [REDACTED];
 Rebecca Plevin [REDACTED]; Tony Barboza

Dear Ms. Nakamura and Ms. Snyder,

This email is a follow-up to the call I made to both of you immediately following the 4th working group meeting regarding rule 1430 wherein there was some debate as to whether reducing odors should be included in the goals/objectives of rule 1430. I would like to reiterate in writing what I expressed verbally to both of you by phone the day after the workshop: community residents, homeowners in Paramount, and I strongly assert that the language of 'odor control' in the stated goals and objectives of rule 1430 remain as it was originally proposed at the outset of grinding meeting #4 in the draft by Ms. Nakamura. Although I stated at the meeting that I would prefer to see the language of odor removed from the goal/objective if fighting to keep it in opposition to protests from the Metal Lobby would cause rule 1430 to be postponed, I have since spoken with community members who are in disagreement. They are concerned that ongoing odors will not only decrease the value of their property but will more importantly continue to bother their children as they play in their yards and schools including Lincoln, Gaines (elementary and preschool), and Jackson Middle School. Concerned Paramount Resident members and members of the Paramount Community Coalition Against Toxins and myself all want to odor reduction to remain a critical component of the goal of rule 1430.

11-1

We also want to see the wording of 'odors' remain in the signage posted outside the 5 forging companies in Paramount as well as other forging companies in Southern CA. If the wording on the posted sign includes a warning to call SCAQMD regarding 'Air Quality Concerns' we would like to see this vague language explicated with specific examples such as "Report Air Quality Concerns including odors, dust, and smoke to 1 800 CUT SMOG." We do not think that the phone number of the company should be included on the signage as that could lead to confusion as to who is in charge of monitoring these concerns. We suggest that the signs be bilingual in the language that is used predominately in each community in addition to English.

11-2

According to the LA Times article written by Tony Barboza, there have been 350 calls complaining of odors in Paramount since 2011 with over 50% of them from metal companies. Last week 9 teachers from Gaines School called in complaining of an odor that was not verified so no public nuisance violation was issued. Six teachers from Lincoln School called on Friday and 3 from the same school as well as other residents last Wednesday. Something must be done to reduce this continual nuisance and injustice. That is why is it so important that rule 1430 retain this language.

11-3

Thank you for considering our concerns.

Lisa Lappin

- 11-1 Response:** The purpose of Proposed Rule 1430 still includes reducing odors. In addition, contingency provisions have been added to require facilities to begin implementing odor reducing measures after five confirmed odor complaints that are associated with their metal grinding or cutting operations.
- 11-2 Response:** The wording of the signage have been revised to state, “TO REPORT AIR QUALITY ISSUES SUCH AS ODORS, DUST, OR SMOKE FROM THIS FACILITY, CALL EITHER THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG OR [*FACILITY CONTACT PHONE NUMBER*].”
- 11-3 Response:** Please see response to comment #11-1.

Comment Letter #12**Lisa Lappin****January 19, 2017****(Email addresses are not shown to protect the privacy of email recipients)**From: Lisa Lappin

Date: Thursday, January 19, 2017

Subject: Proposed Changes to Rule 1430 to safeguard children

To: Susan Nakamura <snakamura@aqmd.gov>, Cher Snyder [REDACTED],Joe Lyou [REDACTED], Robina Suwol [REDACTED], Jane Williams [REDACTED],Cynthia Babich [REDACTED], Rebecca Plevin [REDACTED],Rachel Uranga [REDACTED], "Barboza, Tony" [REDACTED],michele lewis [REDACTED], Central Thirteen [REDACTED], [REDACTED]

[REDACTED], Laurie Guillen [REDACTED], Jose [REDACTED]

Dear Ms. Nakamura,

Thank you for working so hard on rule 1430 over the past years. Although the rule is strong in some regards and will help protect public health, I would like to see some revisions made that will strengthen it further for the sake of school children and residents in the low-income communities where many of these forging companies are zoned. One revision which seems critical for public health of children living near forging companies (who play in the dirt outside their homes and put it inadvertently into their mouths through touch) is that the distance of sensitive receptors be expanded from 300 ft. to 500 ft. This distance is underpinned by the CARB Land Use Planning Handbook and is necessary to protect the health of children and the elderly, the most vulnerable of our society. This is also critical to safeguard patients in hospitals whose breathing is compromised. If the distance is extended from 300 to 500 ft., four public schools that would have been excluded from the benefit of additional protective measures would be safeguarded including Lindberg Elementary, Firth Rixson, Longfellow, and Robert F. Kennedy School, zoned just 70 feet beyond the current 300 ft. regulation.

12-1

Secondly, I strongly support Robina Suwol's proposal at rule/grinding meeting #4 that preschools, day care centers, Head Start Programs, and other educational settings for children 0-5 that are not located on public school grounds be considered in the category of schools rather than sensitive receptors with the additional footage requiring additional protective measures including negative air with Hepa filtration. It is imperative that settings for children aged 0-5 (the most vulnerable of all ages) not be omitted from the provision requiring that extra protective measures be required on forging companies grinding in their proximity.

12-2

Lastly, as an educator for 25 years and an advocate for children, I strongly propose that the distance of 1,000 ft. discussed in the paragraph above be extended to 1,500 ft. to provide additional protective measures be required on forging companies that grind within 1,500 ft. of 2 elementary schools that will be exempted from this provision as the draft is currently written. These schools include: Vernon City School which is zoned 1437 ft from Ajax Forge and Ann St. Elementary zoned 1100 ft. from CA Drop Forge. Given the environmental injustices that the children of Vernon have endured since birth as a result of Exide Battery Plant, I trust that SCAQMD, the community of Vernon, environmental activists, a sympathetic public, legislators, and even the Metal Lobby would understand the need to extend the distance from 1,000 ft. to 1,500 ft. to protect these children as well as the children at Ann St. Elementary. It seems unjust that they would be prevented this additional safeguard because of a 100 ft. additional distance. The following CA Education Code underpins the need for this extension, requiring a distance of one quarter mile between proposed schools and sites that emit toxins (1320 ft.). "The LEA shall consult with the administering agency and the local air pollution control district or air quality management district to identify facilities within a quarter mile of the proposed site that might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials, substances, or wastes and shall provide written notification of those findings." (See Education Code Section 17213(b) and Public Resources Code Section 21151.8(a)(2).) An additional 180 ft. is not an unreasonable request.

As discussed at grinding meeting #4, metal lobbyists and environmental lobbyists could easily find common ground on creating legislation that would prohibit schools and programs for children 0-5 from being zoned in the future within 1,500 ft. of companies using toxic materials including forging companies. In fact, a precedent already exists.

Thank you for your attention to these concerns. I look forward to continuing to work together to find a rule that safeguards the children of SCAQMD basin and one that will serve as an example to other regions and states.

Sincerely,

Lisa Lappin

12-3

12-1 Response: Proposed Rule 1430 has been modified to require facilities that are within 500 feet to install negative air for their total enclosure.

- 12-2 Response:** Proposed Rule 1430 has been modified to require facilities that are within 1,000 feet of a school, pre-school, early Head Start or Head Start program to install negative air for their total enclosure.
- 12-3 Response:** The SCAQMD staff is sensitive to schools that are in impacted areas, such as Vernon Elementary School. Extending the distance from 1,000 to 1,500 feet is will have little impact on this school. The greatest reduction will be the pollution controls for the grinding stations and the total enclosure. Adding the negative air to the total enclosure will provide an additional benefit to ensure fugitive emissions are contained within the enclosure, with the benefit to receptors that are at a much closer distance than 1,000 feet. Pursuant to the CARB handbook, there are multiple references to utilizing a 1,000 feet of separation between distribution centers, rail yards, and chrome platers. ARB's 2002 Barrio Logan Study measured concentrations of hexavalent chromium in the air. Results indicated that over 90 percent risk reduction occurs within 300 feet. Less than 10 percent risk reduction is achieved beyond the 300 feet, and much less beyond 1,000 feet. CARB's recommendation for siting new sensitive land uses within 1,000 feet, is a precautionary measure. Establishing the requirement for negative air for schools, preschools, pre-head start, and head start programs that are 1,000 feet of a metal forging facility is health protective.

Response to Comment #13**Julia Clabault****December 8, 2016****(Email addresses are not shown to protect the privacy of email recipients)**

From: Julia Clabault [REDACTED]
 Sent: Thursday, December 8, 2016 5:12 PM
 To: Daniel Garcia <dgarcia@aqmd.gov>; Barbra Lee [REDACTED]; Secretary Roriguez [REDACTED]
 Subject: EPA Agencies Performing

Mr. Garcia,

I am including the director and the secretary of EPA in this email correspondence out of frustration of you Mr. Garcia, NOT responding to any emails that I have sent you even though you are the contact person on outbound memos concerning Paramount City pollution problems, I also would like the director and secretary to be informed and respond to this letter I am taking the time to write concerning AQMD, The Health Department, and DTSC, and working together to with city officials and community members to address environmental concerns in a timely manner. There seems to be no accountability.

AQMD higher officials have failed to responded to emails (Derrick Alarorre, Wayne Nastri, Jason Lowe to name a few) regarding concerns about the city of Paramount resident's request for AQMD to go door to door to issue STOP WORK orders until companies can operate safely assuring the community they are no longer contributing to distributing toxic cancer causing debris (e.g. Chrome 6) We have patiently and repetitively been asking AQMD to address these concerns since 2012 when they continued to get regular high readings when doing test samples, after they had supposedly addressed Carlton Forge pollution violations.

AQMD was taken four years of taking samples and receiving the SAME data indicating a spike in Chrome 6, and have done nothing to work with city officials to pull all business licences and commence immediate door to door inspections. I called and request air sampling be completed by AQMD in 10/2016 on my property because AQMD complained they could not figure out or get permission to establish more testing stations. John Akers and Michael Pua dropped off clear plastic boxes with test plates and NEVER followed up with any results. More test plates were dropped off and never picked up (Yes. I still have the plates as proof). Cher Synder had no follow through in ensuring her staff would complete the task of picking up the plates and delivering test results.

The Health Department was never notified from AQMD of the any readings in the past years that were not in safe range, and to date still have produced not flier sent to residents homes providing information on the precautions that the community should take to limit exposure. After filing a EPA report and many more emails unanswered from Dr. Rangam, I reached Carrie Tayour, Health Department, who committed to coming to my property to take a soil sample due to my fear of the black fine dust which sparkled under sunlight that was collecting on my white patio pad could be Chrome 6 which could also be seeping into my ground water. Carrie and Michael Jordan sent announced to my house the day before Thanksgiving 11/23/16 John Ferrer, Industrial Hygienist, and Renor Mayshack to take a scan of my soil. Both Carrie and Michael promised this was the first step and than a lab soil test would be completed. Carrie also stated in an email she would follow up with me on what the soil reading were to explain them to me. She never did follow up explaining anything nor came back to take a soil test to have a lab asset the sample. NO ONE is answering where is all the Chrome 6 going when it is not staying in the air?

This is appalling. There is NO ACCOUNTABILITY for any of these agency to be held responsible to be responding in a timely manner to address issues and fix problems. NONE of these agencies are even talking and working with one another. The Health Department should have been notified years ago when AQMD got reading about unsafe levels that the residents were being exposed too. All these big salary positions sponsored by our tax payers money and no one is working too hard, and Wayne Nastri is publicly stating in the LA TIMES "...no other agency would be moving this fast to address the issue". That horse's ass. I wish he had to live here and have his children breath what we have to breath due to his lack of action every day. Sam Atwood is stating "No immediate threat and people do not have to leave their homes". Again you come live here and try to resume normal life with your windows open or try sitting outside on your patio to read a book or conduct outdoor activities and feel safe when you have cancer causing toxic particles in the air leaving you with a soar throat daily.

13-1

We the residence of Paramount City are appalled by EPA agencies (AQMD, HEALTH DEPARTMENT, and DTSC) lack of professionalism. These agencies are not being supervised or held accountable to perform. They are not working cohesively to identify the sources and immediately issuing STOP WORK orders until these companies can prove they are in compliance. This is profit over wealth. You would not allow a restaurant to continue to serve food that is causing illness to people, so why are you not moving to promptly and swiftly to stop the toxic out bursts and have transparency with data logs posted on the Internet of what your agencies are doing daily to inspect and limit business licenses so you are not having to high of a concentration industries in one small area ?

Paramount City is only five square miles and 50,000 people. How many metal business do you have here operating?

Most recently, ONLY two businesses here in Paramount, Anaplex Corporation and Aircraft Heat Treating Company have been sited by AQMD in the last four years.

We were wondering when are you going to address all other possible businesses polluting our air?

Why are you NOT pulling all the licenses and inspecting other possible contributors of this poison and immediately issuing STOP WORK ORDERS NOW?

The Paramount Refinery (burning oil creates Chrome 6) why is this not being inspected?

We want the Medical Waste Company (no other city would give permit too) inspected, as well from the Health Department.

Why are these agencies not being inspected at the intervals and transparency to the public similar to businesses serving food with posted letter grades on the outside of the building indicating last date inspected and clearance codes indicated?

Mr. Garcia you have not responded to emails these are the problems we see with your draft for next steps for AQMD.

You have now taken a MONTH to write a proposal for grinding operations that could have been written in a few days. SET A DATE and ENFORCE the plan NOW and REVISE as needed. We are tired of your weekly TOWN HALL MEETINGS which AQMD continues to refuse to send out mailings to homes to include all residents, so only few people even know about the meetings. We are predominantly Spanish and I had to complain to the City Manager, John Moreno that AQMD has nothing printed in Spanish. You also run meeting and provide no ones name or contact information for further questions to be addressed. That is so unprofessional and unethical as well.

HERE ARE OBJECTIONS TO PROPOSED RULE 1430
ALL CENTERED AROUND LITTLE to NO ACCOUNTABILITY FOR AQMD TO SET REASONABLE TIME LINES AND MAINTAIN A SCHEDULE OF REGULAR INSPECTIONS WITH POSTED RESULTS TO THE PUBLIC

1. No Rule Adoption Date

AQMD refuses to state an action time line for the proposal. 30 more days later we have endured yet another month of toxic exposure. AQMD proposal has compliance dates all set to 60 to 90 days with 1 year to 4 year source test emissions completed not by AQMD, but the owner. A schedule needs to be adhered to by AQMD similar to restaurant inspections where the clearance for safe operations is posted on the front of the building indicating last day inspected by AQMD and their rating (e.g. A, B, C)

2. AQMD filed a proposed order that COULD shut the companies down if no remedy is made to fix the situation. Yet AQMD needs some district administrative action that must first be considered by an independent body to have it enforced.

3. WHAT? Shut the business down NOW till they can prove to run safely. PERIOD

13-1
cont

13-2

13-3

13-4

- *No later than 12 months for the Date of the Rule Adoption operations for grinding are to be conducted in an enclosure. NOT ACCEPTABLE this is a year from now. (A) Conducting grinding in a temporary enclosure NOT ACCEPTABLE This is not even defined what that would look like, but could be interrupted that tarps could be set up in the shape of cube would be acceptable. NO Temporary Structure should be } 13-5
- (6) The owner only needs to do inspections once a month. NOT ACCEPTABLE each shift should be responsible to for testing to make sure it is safe to proceed. } 13-6
- (7) Must fix repairs and leaks with in 72 hours NOT ACCEPTABLE If there is a leak all operations must STOP until repaired. } 13-7
- (8) 12 months after adoption of the RULE facilities must conduct a metal grinding test if they are within 300 ft of the sensor NOT ACCEPTABLE This should not take 365 days for this to be implemented and it should be mandatory for all businesses to conduct this test regardless of sensor location. } 13-8
- (e) Metal Grinding Emission Requirements
(I) No later that 1 year of Adoption of the Rule facilities shall vent emissions NOT ACCEPTABLE Business should not be able to operate until they are properly vented and clearly this should not be accepted that they have a year to comply. } 13-9
- (f) Housekeeping Requirements
30 days from Date of Adoption (this date is never set by AQMD) owner shall control conducting all following housekeeping procedure NOT ACCEPTABLE AQMD is NOT writing in the proposal any accountability for themselves in this proposal. We need regular follow up inspection by AQMD with transparency to the community of the findings posted outside the buildings. This is the only way to have checks and balances in place to ensure businesses are operating safety and that AQMD is doing their jobs. } 13-10
- We also need to see what are the consequences and fines for any violations. That is not in the proposal to even ensure accountability.
- Maintenance and Repair Activity Requirements
- 30 days from Adoption of Rule NOT ACCEPTABLE STOP ALL WORK UNTIL BUSINESSES CAN OPERATE SAFELY!!!!!!!!!!!!!!
- (1) (A) Source test for PM emissions once every 12 months NOT ACCEPTABLE This should be done bi-weekly. (B) Source test for hexavalent chromium and multiple metal emissions tested every 48 months NOT ACCEPTABLE That is every 4 years you are testing for this. That is crazy! Again this should be bi-monthly. } 13-11
- (2) 0-90 day for pre-test protocols for source tests provided to Executive Officer (Who is this Executive Officer?) NOT ACCEPTABLE Time lines to comply are months away when they should be at best a few weeks away. } 13-12
- (10) Tests must be completed by SCAQMD laboratory Approval Program unless excused by the Executive Officer to have testing done at another lab. NOT ACCEPTABLE
There is no established set time frame for when the tests will be completed, or where the data will be posted for public review, and their should be only one point person that is handling testing and that should be AQMD. } 13-13

(13) 60 days or 2 months to submit testing reports NOT ACCEPTABLE time line. It should not take 2 months to complete the report.	} 13-7 cont
Monitoring	
(4) Periodic smoke test shall be conducted, unless this presents an unreasonable risk to safety every 3 months NOT ACCEPTABLE AQMD is not even stating what is considered "unreasonable risk" so they are unable to hold anyone accountable for not conducting the smoke test because unreasonable risk would be subject to interruption.	} 13-14
(F) Log of reports regarding odor, date and time of occurrence, name of person filing the complaint, and how it was resolved should be kept. NOT ACCEPTABLE Who is keeping the log the owner? Come on where is AQMD to step in and establish accountability for logging occurrences and have transparency to the public of their inspections?	} 13-15
(K) Sinage 1 800 CUT SMOG NOT ACCEPTABLE We want AQMD to take some responsibility in having regular inspections completed with posted results on the outside of the building just like the ones that restaurants have indicating the facilities are clean and when they were last checked.	} 13-16
Permit Application 60 Days from Rule Adoption NOT ACCEPTABLE AQMD can make some more money collecting permit application fees. We the citizens of Paramount want AQMD to be more active in personally doing inspections and posting results on the outside of the building last day inspected and rating for how clean the facilities are. AQMD has too many bloated big salary people on tax payers pay role and this agency is not performing.	} 13-17
Please give me the email address to Gina McCarthy from EPA. I am having a hard time locating her contact information.	
Paramount residents want the report made public from DTSC that was projected to take 2 years for them to complete and promised done by Oct 2016 which was suppose to give an update on contaminant (e.g. LEAD) that they had discovered. We want the Health Department to provide notice to schools and the community of health precautions to take to limit the exposure of hexavalent chrome. We want AQMD to do door to door inspections and issue stop work orders until they can operate safely.	
Julia Clabault	

13-1 Response: Thank you for your concerns about the city of Paramount. In previous emails to you, staff has informed you about our Expanded Monitoring Efforts for Hexavalent Chromium in the city of Paramount. The SCAQMD has been working with various agencies to investigate facilities and address the high levels of hexavalent chromium found in late October. The SCAQMD updates information on the investigation, monitoring data, enforcement actions, information for an informational weekly call for the public that you can obtain from our website at:
<http://www.aqmd.gov/home/regulations/compliance/air-monitoring-activities>

13-2 Response: Developing a new rule or regulation takes time to study the affected sources, pollution controls, and develop a proposal. The SCAQMD staff works with a stakeholder group that includes representatives from the community, environmental groups, affected industries, and agencies. Through the rule making process, the SCAQMD staff will visit affected facilities to understand their existing operations. Sources regulated under Proposed Rule 1430 are currently unregulated and so the SCAQMD had

very little information about the affected facilities when the rulemaking process began.

Regarding providing information for the Expanding Monitoring Efforts for Hexavalent Chromium in the city of Paramount, much of the material distributed at the town hall meetings was translated in Spanish. In addition, there has been a Spanish translator at all off the town hall meetings and on the weekly informational call to update the public on the Expanded Monitoring Efforts.

- 13-3 Response:** Proposed Rule 1430 is scheduled for a public hearing on March 3, 2017. Upon rule adoption, affected facilities must meet specific provisions and compliance deadlines. Beginning date of rule adoption outdoor at metal forging facilities and certain housekeeping measures must be implemented. Numerous compliance deadlines for additional requirements follow these initial requirements. For details on additional requirements and compliance deadlines refer to Proposed Rule 1430 dated February 1, 2017.
- 13-4 Response:** The SCAQMD currently lacks the authority to shut a facility down, however, in the signed Stipulated Order for Abatement for both Aerocraft and Anaplex, there are provisions in which each facility is required to curtail their chrome emitting operations if the SCAQMD's monitor is greater than 1 ng/m³ averaged over the most three recent valid monitoring results. Please visit SCAQMD's website on Paramount Ongoing Air Monitoring Activities at: <http://www.aqmd.gov/home/regulations/compliance/air-monitoring-activities>
- 13-5 Response:** Facilities need sufficient time to construct a total enclosure, if they are currently not conducting metal grinding operations within an existing building. The proposed rule defines "temporary enclosure" to be structure comprised of a floor, roof, walls, and or partitions on at least three sides or three quarters of the perimeter that surrounds areas where metal grinding or metal cutting operations are conducted.
- 13-6 Response:** These inspections are for the building enclosure. These will be physical structures that deterioration should be minimal, if any. Proposed Rule 1430 requires that monthly inspections be conducted to ensure that the structure is free of cracks, breaks, etc. Monthly inspection ensures that these enclosures are well maintained and is proactive to ensure that if there is an issue it can be fixed before it becomes a larger issue.
- 13-7 Response:** Thank you for your comment. Staff added the following language in Proposed Rule 1430:

The owner or operator of a metal forging facility shall immediately stop metal grinding and metal cutting operations if inspection of a total enclosure where these operations are conducted reveals a break, crack, gap or deterioration which results in fugitive metal dust. The owner or operator may resume metal grinding and metal cutting operations until the total enclosure is repaired pursuant to paragraph (d)(7), if temporary measures are implemented that ensure no fugitive metal dust results from the break, crack, gap or point of deterioration.

13-8 Response: It appears that the commentor is that the facility has 12 months to build a total enclosure with negative air. 12 months is an aggressive schedule. It takes time for the facility to complete their engineering and design, submit permits, begin demolition and construction, then installation of the pollution controls for the total enclosure with negative air.

13-9 Response: Please refer to Response to Comment #13-8. Most facilities do have their emissions vented to a baghouse. However, Proposed Rule 1430 will require that the baghouse meets specific emission standards as well that it is designed with the proper air flow to ensure that the emissions are being appropriately collected.

13-10 Response: We use that language as a place holder for when the rule is adopted. We are working towards an adoption date of March 3, 2017.

13-11 Response: A source test is an extensive testing procedure to quantify the emissions from the stack. The cost per stack can be \$5,000 per test for PM and \$7,500 per test for multi-metals or for a hexavalent chromium source test. It is not reasonable to require this type of testing weekly or bi-monthly.

The proposed rule does require a series of parametric monitoring requirements such as a bag house leak detection system, measure the pressure across the HEPA filter, and conducting a smoke test. All of these monitoring techniques provide additional information on the performance of the air pollution control device and ensures proper operation.

13-12 Response: The term "Executive Officer" to refer to SCAQMD staff. The pre-test protocol is to be submitted as the affected facility gets closer to installation of the permitted pollution control equipment.

13-13 Response: This provision requires that the operator use a test laboratory to analyze the source test results that is approved under the SCAQMD Laboratory Approval program. The tests which are referenced are the source tests under paragraph (h)(1). Compliance dates for initial source tests are specified in subdivision (h).

- 13-14 Response:** Appendix 1 of Proposed Rule 1430 sets-forth clear procedures for the smoke test requirements in subdivision (i). For example, section 3.1 of Appendix 1 requires that the owner or operator evaluate any potential physical hazards to ensure that the smoke test is conducted in a safe manner.
- 13-15 Response:** Proposed Rule 1430 establishes specific recordkeeping requirements for odor contingency measures and monitoring requirements. At any given time, these records are subject to inspection by the executive officer to determine compliance with the proposed rule. These records are in addition to records maintained by the District for other applicable SCAQMD rules, such as, Rule 402-Nuisance.
- 13-16 Response:** SCAQMD staff is proposing that metal forging facilities subject to Proposed Rule 1430 comply with specific signage requirements. Please refer to subdivision (k) of the proposed rule for these signage requirements.
- 13-17 Response:** Proposed Rule 1430 provides a brief window of time to allow existing forging facilities with metal grinding or metal cutting operations an opportunity to implement a compliance strategy (i.e., determine appropriate air pollution controls) for the proposed rule. For example, during this time a facility would determine the adequate controls needed to comply with the rule requirements and submit all necessary permit applications. Although this brief window of time is provided for facilities to submit permit necessary permit applications it is important to emphasize that the proposed rule will immediately prohibit outdoor metal grinding and metal cutting.

Comments Received at the January 19, 2017 Public Workshop

The following comments were received at the Public Workshop for Proposed Rule 1430 on January 19, 2017.

PWS-1 Comment: Was there a change in the requirement if the source test demonstrated less than 1% total chromium?

PWS-1 Response: Based on input from stakeholders during Working Group #5 on January 11, 2017, SCAQMD staff modified PR 1430 to only require source tests of hexavalent chromium if the bag house catch was less than 1 percent [is it 1 % or less] as demonstrated at each change out when the facility removes or disposes of the materials in the baghouse catch.

PWS-2 Comment: How often would a source test occur?

PWS-2 Response: The frequency of the source test would depend on the pollutant. In general, for PM, the source test is annually, for multi-metals the source test is once every four years, and if the total chromium is greater than 1 percent from the baghouse catch, source testing for hexavalent chromium is once every four years. Subdivision (h) of the proposed rule provides more details and criteria for less and more frequent source testing.'

PWS-3 Comment: Regarding the signage requirement, the SCAQMD phone number should be listed before the facility contact. It is unnecessary to have the phone contact number of the facility as they are aware of activity occurring at the facility.

PWS-3 Response: SCAQMD staff has modified rule language requiring that SCAQMD contact information to be listed first.

PWS-4 Comment: One revision which seems critical for public health of children living near forging companies (who play in the dirt outside their homes and put it inadvertently into their mouths through touch) is that the distance of sensitive receptors be expanded from 300 feet to 500 feet. This distance is underpinned by the CARB Land Use Planning Handbook and is necessary to protect the health of children and the elderly, the most vulnerable of our society. This is also critical to safeguard patients in hospitals whose breathing is compromised. If the distance is extended from 300 to 500 feet, four public schools that would have been excluded from the benefit of additional protective measures would be safeguarded including Lindberg Elementary, Firth Rixson, Longfellow, and Robert F. Kennedy School, zoned just 70 feet beyond the current 300 feet regulation.

PWS-4 Response: Proposed Rule 1430 has been modified to extend the distance from sensitive receptors from 300 to 500 feet, such that facilities within 500 feet from a sensitive receptor will be required to have total enclosure with negative air vented to pollution controls.

PWS-5 Comment: Regarding the provision for requiring negative air for total enclosures, preschools, day care centers, Head Start Programs, and other educational settings for children 0-5 that are not located on public school grounds should be included in the category of schools rather than sensitive receptors. It is imperative that settings for children aged 0-5 (the most vulnerable of all ages) not be omitted from the most health protective provision that requires negative air for total enclosures.

PWS-5 Response: Proposed Rule 1430 has modified to require negative air for facilities within 1,000 feet of a school or and early head start schools (birth to 3 years old), head start schools (3 to 5 years old), and preschools (3-4 years old)

PWS-6 Comment: As an educator for 25 years and an advocate for children, I strongly propose that the distance of from schools be extended from 1,000 feet to 1,500 feet to provide additional protective measures. Extending the distance to 1,500 feet will provide additional protection for two elementary schools. These schools include: Vernon City School which is zoned 1437 feet from Ajax Forge and Ann St. Elementary zoned 1100 feet from California Drop Forge. Given the environmental injustices that the children of Vernon have endured since birth as a result of Exide Battery Plant, I trust that SCAQMD, the community of Vernon, environmental activists, a sympathetic public, legislators, and even the Metal Lobby would understand the need to extend the distance from 1,000 feet to 1,500 feet to protect these children as well as the children at Ann St. Elementary. It seems unjust that they would be prevented this additional safeguard because of a 100 feet additional distance. The following CA Education Code underpins the need for this extension, requiring a distance of one quarter mile between proposed schools and sites that emit toxins (1320 ft.). "The LEA shall consult with the administering agency and the local air pollution control district or air quality management district to identify facilities within a quarter mile of the proposed site that might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials, substances, or wastes and shall provide written notification of those findings." See Education Code Section 17213(b) and Public Resources Code Section 21151.8(a)(2).) An additional 180 ft. is not an unreasonable request.

PWS-6 Response: The SCAQMD staff is sensitive to schools that are in impacted areas, such as Vernon Elementary School. Extending the distance from 1,000 to 1,500 feet will have little impact on this school. The greatest reduction will be from the pollution controls for the grinding stations and the total enclosure. Adding the negative air to the total enclosure will provide an additional benefit to ensure fugitive emissions are contained within the enclosure, with the benefit to receptors that are at a much closer distance than 1,000 feet. Pursuant to the CARB handbook, there are multiple references to utilizing a 1,000 feet of separation between distribution centers, rail yards,

and chrome platers. ARB's 2002 Barrio Logan Study measured concentrations of hexavalent chromium in the air. Results indicated that over 90 percent risk reduction occurs within 300 feet. Less than 10 percent risk reduction is achieved beyond the 300 feet, and much less beyond 1,000 feet. CARB's recommendation for siting new sensitive land uses within 1,000 feet, is a precautionary measure. Establishing the requirement for negative air for schools, preschools, pre-head start, and head start programs that are 1,000 feet of a metal forging facility is health protective.

PWS-7 Comment: We do want to express our concern with what the view of the rule will be in terms to hexavalent chromium, the science we have conveyed to the District, the science of metal grinding, the data you have collected at the air emission sources demonstrate that metal grinding is not producing the dangerous levels of hexavalent chromium. We are concerned that those who are impacted by this are going to believe that this rule will resolve this problem, we would like the District to be clear at both the workshops, townhall meetings, board meetings, in your staff notes, specifically what that is going forward.

PWS-7 Response: Please refer to response to comment #5-2.

PWS-8 Comment: There should be a separation of toxic and non-toxic metals. Previously the discussion of the rule was focused on toxic metals and then 60 days later it includes both. We believe that the agency should look at the health risk of toxics. Other agencies have a separation of the two, including this one [SCAQMD]. There should be two separate solutions.

PWS-8 Response: Please refer to response to comment #5-2.

PWS-9 Comment: Previously it was understood that small hand grinding was based on where you were grinding, but now it is based on the size of the part. The definition should be changed to small part grinding since you aren't talking about surface area.

PWS-9 Response: The reference to "small hand grinding" has been changed to "small part grinding."

PWS-10 Comment: Is the District pursuing odors? We are open to discussing odors, but each week something new is coming up and we want to catch up to what your concerns are.

PWS-10 Response: The proposed rule will address odors. Requiring total enclosures are intended to reduce fugitive metal particulate emissions from metal grinding operations, but are expected to also reduce odors. Staff has added contingency odor measures, in the event there are confirmed odor complaints. The purpose of this provision is to ensure the facility is being responsive to confirmed odor complaints and implementing measures that can minimize off-site odor issues.

PWS-11 Comment: What section in the 2005 CARB advisory report are you referring to establish the 1000 feet standard? There are many distance listed and looking for clarity for each one was used. The rule is talking about every single metal used and we want to know how all those metals are connected to your reference.

PWS-11 Response: The 1,000 feet reference is from Table 1-1, Recommendations on Siting New Sensitive Land Uses Such as Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities in CARB's Air Quality and Land Use Handbook.

PWS-12 Comment: When will the economic assessment be available?

PWS-12 Response: The Draft Socioeconomic Impact Assessment for Proposed Rule 1430 will be available 30 days before the Public Hearing.

PWS-13 Comment: There is a broad range of the monthly revenue for these facilities. For some facilities, the maintenance costs are threatening these facilities.

PWS-13 Response: The SCAQMD staff understands that the cost of compliance for some facilities is financially difficult. Facilities that are grinding in the open air with no pollution controls will have higher costs as they will need to build and enclosure, and install pollution controls. Staff has incorporated mechanisms that would allow a facility to do less frequent source testing.

PWS-14 Comment: Metal grinding occurs in over 20,000 facilities that impacts many different industries. We are asking the definitions to be tighten.

PWS-14 Response: Please refer to response to comment #5-11.

PWS-15 Comment: Facilities that aren't doing swing/billet grinding at their facilities are still being included in the rule.'

PWS-15 Response: Please refer to response to comment 5-4.

PWS-16 Comment: Why has there not been an emission rate limit for PM or chromium?

PWS-16 Response: Proposed Rule 1430 does establish a PM emission limit of 0.002 grains per dry standard cubic feet. The basis of this emission limit is source tests from two metal forging facilities with metal grinding operations.

At this point, the SCAQMD staff does not have enough information to establish an emission limit for hexavalent chromium or any other toxic air contaminant. A key consideration in establishing an emission limit for is what emission limits have been achieved in practice for similar sources. Since metal grinding is currently an unregulated source and there are very few sources that have SCAQMD permits and only one facility has a source test for hexavalent chromium. The source test showed very low levels of hexavalent chromium, and in some stacks at this facility the levels were below the detection limit. The SCAQMD staff needs more information from the affected facilities to establish an emission limit, if one were

needed. It should be noted that the proposed rule only requires facilities with a baghouse catch greater than 1 percent total chromium to conduct a hexavalent chromium source test.

PWS-17 Comment: The point source requirement should have a de minimus limit based on a pounds per hour for each facility. A small facility and large facility may be emitting different amounts, but would still be meeting the emission limit that is based on concentration.

PWS-17 Response: Please refer to Response to Comment #5-4. Regardless of the size of the facility, the SCAQMD has established an emission standard of 0.002 pounds per dry standard feet. The pollution controls will be sized according to the intensity of grinding operation to meet the emission standard. For example, a facility with a smaller, less intense grinding operation would require a smaller baghouse and smaller blower than a larger more intense grinding operation.

Comments Received at the January 25, 2017 Public Consultation Meeting

The following comments were received at the Public Consultation Meeting for Proposed Rule 1430 on January 25, 2017.

PC-1 Comment: Proposed Rule 1430 requirements are being implemented at Carlton Forge Works, but odors are still persistent.

PC-1 Response: Within the last month there has been an increase in the number of confirmed odor complaints at Carlton Forge Works. At this point, there is not sufficient information to understand if there were any changes at Carlton Forge Works that caused this increase in odor complaints.

Proposed Rule 1430 has been modified to require implementation of additional measures to reduce odors from the metal grinding operation if a facility receives more than 5 confirmed odor complaints. For the purpose of this proposed rule, confirmed odor complaints must be associated with the metal grinding operation. In addition, SCAQMD Rule 402 prohibits a facility from discharging contaminants into the atmosphere that causes a nuisance to a significant amount of individuals. Additional requirements may be imposed through implementation of Rule 402.

PC-2 Comment: Proposed Rule 1430 is the first step in regulating metal working facilities and SCAQMD staff should look beyond metal forging facilities.

PC-2 Response: SCAQMD staff is in the process of developing and amending existing rules that regulate toxic metal emissions from various sources. For 2017 there are several proposed rulemakings for Proposed Rule 1420 for lead sources, Proposed Amended Rule 1407 for metal melting, Proposed Rule 1407.1 for metal foundries, Proposed Rule 1435 for metal heat treating, Proposed Amended Rule 1426 for metal finishing (for non-hexavalent chromium source), and Proposed Rule 1469 for hexavalent chromium metal finishing operations.

PC-3 Comment: The requirement to have a total enclosure with negative air are for facilities located within 300 feet of a sensitive receptor, or within 1,000 feet of a school is not sufficient. The distance should be expanded to 500 feet of a sensitive receptor, or within 2,000 feet of a school. This would be health protective and capture an additional metal forging facility that is more than 1,000 feet of a school, but less 2,000 feet.

PC-3 Response: Please refer to PWS-6.

PC-4 Comment: How will the wastewater generated from the semi-annual cleaning of the roof be handled?

PC-4 Response: The SCAQMD has required facilities to perform roof cleanings in previous rules such as Rule 1420.2 – Emission Standards for Lead from Metal Melting Facilities on a semi-annual basis. Facilities regulated under Rule

1420.2 have installed water collection systems to capture wastewater. Metal forging facilities regulated under Proposed Rule 1430 may implement similar measures. Wastewater generated at the facility would need to be discharged and handled pursuant to the wastewater discharge permit by the respective agency.

PC-5 Comment: Proposed Rule 1430 should establish fence-line monitoring. This would tell SCAQMD the location of other issues that may be present at the facility. Monitors should be placed where the risk is the greatest such as facilities with violation or have high amounts of metals being used.

PC-5 Response: Proposed Rule 1430 does not require fenceline monitoring. The proposed rule does have a series of tools to ensure that the pollution controls required under the proposed rule are working properly such as periodic source testing, installation of bag house leak detection systems, installation of continuous data acquisition systems to monitor pressure drops or increases in the HEPA filtration, and periodic smoke tests to ensure air is moving towards the pollution controls and is not being impacted by cross-drafts within the total enclosure. All of these mechanisms will ensure continued compliance.

PC-6 Comment: Regarding the signage requirement, the language on the sign should be expanded to state to include odors, dust, or smoke, and not just odors.

PC-6 Response: Staff has modified the language to state, “to report air quality issues such as odors, dust, or smoke...”

PC-7 Comment: On the sign, the SCAQMD phone number should be before the facility contact.

PC-7 Response: The proposed rule modified the signage requirement to have the SCAQMD contact information before the facility contact information.